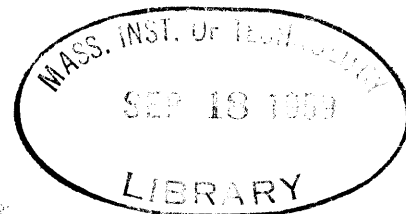


JOINT PROGRAM FOR DEVELOPMENT
OF GOVERNMENT SURPLUS LAND
IN A FOUR-TOWN AREA



by

GEORGE BENSON JOHNSON

B.S., University of Massachusetts
(1950)

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF
CITY PLANNING

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

August 1959

Signature of Author _____
Department of City and Regional Planning, August 18, 1959

Certified by _____
Thesis Supervisor

Accepted by _____
Chairman, Department of City and Regional Planning

38 2.

ABSTRACT

JOINT PROGRAM FOR THE DEVELOPMENT OF GOVERNMENT SURPLUS LAND
IN A FOUR-TOWN AREA: by George B. Johnson

The availability by 1962 of two Naval installations for civilian development could have a great impact on the communities in which they are located. Long range planning and consideration of regional objectives are necessary if the wisest and best use of the land and improvements on them is to be realized.

The Hingham Depot lies primarily in Hingham. Its size, intense-development, and adaptability of equipment and buildings to civilian use, its transportation advantages, are all factors, which have led to a recommendation that it be used as an industrial park under the administration of the Port of Boston Authority - an agency which has the operational experience and financial resources to derive optimum benefits from this tract.

The Cohasset Annex, lying in the four towns of Hingham, Scituate, Cohasset, and Norwell, is less intensively developed and not readily adaptable to civilian use. Its size, its location in four towns, and its speculative value could result in many problems for these small towns if laissez-faire speculation were permitted with only the limited police power controls as regulators. The availability of this land could be an opportunity for the towns rarely encountered. It is recommended that they purchase the Annex, plan for its development as a new community, and resell portions for private development regulated by covenants in accordance with a staging plan. The plan will reflect the needs and objectives of the towns and of the metropolitan region.

The Four Towns are "bedroom" towns with limited financial resources. Present rapid rate of growth will speed up with the opening of the Southeast Expressway into the Area. Despite their increasing indebtedness and their rising tax rates, they are deficient in facilities and services and demand for additional services continues. Small size and limited resources makes it unlikely that they will be able to do much on their own in the future under present conditions. Their greatest assets are environmental amenities and recreation potential. Inadequate circulation and underdeveloped facilities result in confusion and congestion as visitors come into the area in pursuit of recreation.

The development plan for the Annex and the Area proposes a system of integrated commuter-recreation routes and recreation

areas that will form a framework around which the communities may develop while meeting some of the metropolitan recreation needs. The new community provides for residential areas, the availability of which will help regulate the Area-wide growth and result in profits accruing to the Towns from resale of the land. Other areas are reserved as sites for facilities and services that will be operated on an Area-wide basis. Areas are also reserved for regional needs.

Cooperative efforts in carrying out this plan should lead to political and administrative reorganization. Federation of the Four Towns and the new community is recommended. The result should be a more efficient unit better able to develop its resources and control its environment as well as playing its proper role within the metropolitan framework.

Submitted to the Department of City and Regional Planning
on August 18 , 1959, in partial fulfillment of the requirements
for the degree of Master of City Planning

Thesis Supervisor: John T. Howard

Chairman, Department of City & Regional Planning

Letter of Submittal

Massachusetts Institute of Technology

Cambridge, Massachusetts

August , 1959

Professor John T. Howard

Department of City and Regional Planning

Massachusetts Institute of Technology

Cambridge, Massachusetts

Dear Professor Howard:

In partial fulfillment of the requirements for the degree of Master in City Planning, I submit this thesis entitled "JOINT PROGRAM FOR DEVELOPMENT OF GOVERNMENT SURPLUS LAND IN A FOUR-TOWN AREA".

Sincerely,

George B. Johnson

CONTENTS

	<u>Page</u>
Abstract.	2
Letter of Submittal.	4
Introduction and Statement of Purpose and Content.	8
 <u>PART I. THE PROBLEM AND THE OPPORTUNITY</u>	
Chapter 1. The Situation of the land	14
Chapter 2. Evaluation of the Situation and Recommendations for Redisposition of the Depot.	24
Chapter 3. Determining an Approach to the Annex Situation	28
Chapter 4. Recommendations for Reuse of the Annex.	36
 <u>PART II. SURVEY AND ANALYSIS OF THE FOUR-TOWN AREA</u>	
Chapter 5. Four-Town Regional Orientation.	40
Chapter 6. History and Background.	45
Chapter 7. Population and Housing.	48
Chapter 8. General Topographic and Soil Conditions	62
Chapter 9. Generalized Land Use Patterns	64
Chapter 10. Community Facilities and Services	70
Chapter 11. Circulation and Transportation.	75
Chapter 12. Major Recreation and Public Open Space.	81
Chapter 13. Municipal Finance and Public Administration.	94
Chapter 14. Planning Function	100

PART III. THE NEW COMMUNITY

Chapter 15.	The Design Features.	103
Chapter 16.	Criteria for Community Design.	108
Chapter 17.	Residential Areas.	114
Chapter 18.	Educational Facilities	121
Chapter 19.	Community College.	126
Chapter 20.	Commerical Facilities.	131
Chapter 21.	The Center.	135
Chapter 22.	Circulation Plan	139
Chapter 23.	Utilities and the Central Service Area .	141
Chapter 24.	The Area-wide Plan	143
Chapter 25.	Staging Plan	148

PART IV. PLAN EFFECTUATION, ADMINISTRATION, AND
ECONOMIC ASPECTS

Chapter 26.	Putting the Plan into Action	153
Chapter 27.	Political Reorganization and Planning Controls	157
Chapter 28.	Economic Aspects of the Plan	163

APPENDIX

BIBLIOGRAPHY

LIST OF CHARTS AND MAPS

	<u>Page</u>
Population Distribution in South Shore Towns-1955. . .	47
Numerical Population Change (1945-1955) of the Four-Town Area and the Metropolitan Area.	49
Percent Change in Population (1950-1955) of the Four-Town Area and the Metropolitan Area.	50
Four Town Population Trends.	53
Four-Town Area Population Trends as Related to Holding Capacities.	56
Age-Sex Composition of the Four-Town Area and the State	59
Type of Employment - 1950.	59
Relation of Four Towns to the Major Highway System . .	76
Basic Tourist Route System	91
Comparative Analysis of Four-Town Finances	95
Retail Trade Centers	134
Distribution of Major Public Recreation Areas and Forest Lands.	146

Maps Submitted Separately:

Traffic Flow Map- Four-Town Area

Generalized Existing Land Use- Four-Town Area

Zoning Map- Four-Town Area

General Development Plan

Circulation and Staging Plan

Four-Town Area Plan

INTRODUCTION

Decentralization and the shift of population to the suburbs is one of the most significant movements in the long history of urban communities. There is no indication that the movement is abating and the trend is so firmly established that it is now not a question of when or whether it will stop but one of how the change can be planned or controlled in a way that will utilize the resources of both urban and suburban communities to satisfy maximum human desires and needs.

This outward thrust of urban population is becoming increasingly characteristic of smaller and smaller places - towns which originally grew and were structured to perform specific functions for a rural population. The motives that once gave structure to both work and leisure are disappearing. The key function of many of these communities today is not production or employment, but rather to provide residential amenities for a reservoir of manpower that staffs enterprises in the central city and in satellite employment places elsewhere.

The result has been an increasing interdependence between suburbs, satellites and the central city. This interdependence wanders somewhat aimlessly without the political structure and organization to contain it and enable meaningful decisions and plans to be made. The suburbs particularly suffer; their

small size and limited resources are such that they can scarcely control their own environment, let alone having any say in the larger metropolitan area that impinges on them and, in many ways, decides their eventual atmosphere.

As these units coalesce socially and economically, they are also coalescing physically. Each political unit finds it more and more difficult to retain its individuality in the midst of such sprawling development. Lack of clearly defined borders makes for inefficiencies in the provision of public services. Gradually the citizen's pride and sense of identification with the community is destroyed, resulting in irresponsible and inadequate local government. Political boundaries are not enough to demarcate and there is an increasing need to plan so that physical separation becomes a feature in the concept of community.

A search is underway for political inventions to put an end to metropolitan anarchy while, at the same time, guaranteeing strong elements of local political responsibility. While the specialists in other fields wrestle with proposals for innovations and reforming government, taxation, and administration, physical planning of some sort must proceed within the limitations imposed by political boundaries. Remedies to overcome some of these limitations such as the creation of regional planning boards, special districts and extension of extra-territorial planning powers to government

units, are helpful but do not keep pace with increasing problems.

Ineffective as physical planning may be under present systems, it is perhaps natural that it should precede the reorganizations that would increase its effectiveness; by posing physical planning problems and opportunities, the need for metropolitan or regional government of some sort will be brought into focus. But this physical planning cannot be centered around one function such as transportation, pollution control or any other single factor alone. To be workable and organic it requires that there be a synthesis of all the factors involved out of which may emerge a space concept in which every aspect of human well-being would be served within the urban-suburban unit. In working toward this space concept the consequences of decentralization must be recognized for what they are; not conflict between central city and suburb but a natural change with each part of the urban-suburban unit serving a particular function within the larger community.

Purpose and Content of the Thesis

The purpose of this thesis is to devise a space concept whereby separate communities will be brought together in a logical area-wide layout so that they will be able to function more properly - both internally and in relation to the metropolitan region of which they are a part. This physical plan

forms the nucleus around which changes and proposals are tested and considered in relation to political, economic, administrative and social structures of the communities.

The development of the thesis has been made possible by the recent announcement of the Navy to make installations in the South Shore area available for civilian reuse. One of these installations contains approximately six square miles of land and straddles four towns. These conditions present complications which make the inadequate police power planning controls even more inadequate to cope with this situation. This is particularly so if the land were to be developed on a free market by large scale operators. An evaluation of conditions inherent in the land and of various approaches to the situation lead to a conclusion that reservation of the entire tract for recreational uses is probably not the wisest and best use of the land but is preferable to laissez-faire speculation. A broader approach is that the availability of this land could be an unprecedented opportunity for the Four Towns to create a new community, one that would provide area for the location of jointly-sponsored facilities, form a framework around which future development of the entire area could grow, and serve as a common denominator around which other Area-wide problems might be solved.

A survey of the Four Towns reveals that they have many social,

physical, and economical advantages which would facilitate the formation of an area-wide planning unit. The survey also brings out that the Four Towns are deficient in many of the facilities and services considered necessary for satisfactory community life; they lack the proper framework which could guide new growth and prevent suburban blight; they have limited tax resources, a mounting indebtedness, and, in many instances, weak administrative processes. These are all factors which limit their ability to make meaningful decisions and shape their own environment. Although there has been increasing progress in the planning process, the common approach is still a negative one, solving problems on an opportunistic basis and ignoring regional implications.

The outstanding assets of these communities are their semi-rural character and recreational potential. There are many impairments to the functioning of these communities as a recreational area. Obsolete and inadequate circulation is one factor; residential development blocking ocean frontage, leaving little available space for ocean-oriented activities is another; limited funds, local indifference and lack of an over-all plan for development are others.

The new community is intended to form the nucleus from which recreation routes would radiate, leading to major areas such as the town harbors and beaches, and connecting with other inland recreation areas. Surrounding the new community

is a "green belt" providing space for other regional recreational uses and for institutions. Within this ring, planned neighborhood units provide space for residences, with a central area reserved for community and area-wide facilities such as a college, community hospital, modern shopping center, central service area, and a civic center for central administration and services.

To achieve a great many of these physical objectives, changes in political and economic concepts are involved, the intent being that, through the planning process similar process of change in these areas of community organization will also take place. The ultimate goal is not merely an improved environment but to attain a new unit of government, leaving "grass roots" decisions to be determined at the local level, and those issues of a more complex nature worked out cooperatively at the new level. The result should be one step closer to a solution for problems of the urban-suburban unit.

PART I - THE PROBLEM AND THE OPPORTUNITY

CHAPTER I. THE SITUATION OF THE LAND

Abandonment of Naval Installations in Massachusetts

During December of 1958 the newspapers released the story that the Navy was intending to abandon certain installations in Massachusetts. Changes in strategy and economy measures of the defense program were the reasons given. Attempts were made by local interests in Washington to halt these abandonments on the grounds that they would create serious unemployment situations and be generally harmful to the economy of the Boston area. These attempts were unsuccessful and in March 1959, the official word from the Bureau of Ordnance was that the shut-downs were inevitable; the Navy no longer needed these installations so all civilian employees would be relocated in other jobs by June 1959 and the sites would be completely abandoned by 1962.

Redisposition of the Installations:- A definite program for disposal of the sites or any equipment on them has not been announced. The procedure has been in the past for the government to conduct surveys to determine whether there is a need for these sites by any other branch of the military services. If the military or any other federal agency has no need for, or makes no recommendations for

for reuse of the land, the federal government will declare the land surplus property. In this case, the sites would be turned over to the General Services Administration to be disposed of at public auction or in any other way feasible.

Before auction, applicants may apply for special consideration in offering a purchase price and other terms. There have been instances whereby municipalities have taken the initiative and turned the availability of government surplus land into a rare opportunity for benefitting the entire community. (1)

(1) The city of Quincy provides an excellent example of this point. In this city, planning and industrial leaders went to work when the information leaked out that the Navy would abandon its air station at Squantum in 1953. An Industrial Development Committee was formed with representatives of the Chamber of Commerce, Quincy Taxpayers' Association, and the City to find potential users for the 640-acre tract. After many preliminaries in which the Committee met with industrial leaders, politicians, the Navy, the General Services Administration, housing developers, and even a children's camping group, the property was sold to the Boston Edison Company in 1956.

Passing out of federal ownership, the property became taxable and an assessment of \$500,000 was fixed on the land alone. The Edison Company announced plans to build a generating station on the tract with construction costs estimated at \$35-50 million. In addition to the advantages to the city's tax base, the station will provide the area with the most modern power facilities, guaranteeing an ample supply of electricity for growing industry and the increasing number of homes in the area.

The Hingham Naval Ammunition Depot and the Cohasset Annex

Two tracts of land that were included in this abandonment decision were the Hingham Naval Ammunition Depot and an accessory installation, the Cohasset Annex. The first tract is located almost wholly within the town of Hingham, and the second is located in the towns of Hingham, Cohasset, Norwell, and Scituate.

This abandonment announcement had a disturbing affect on the communities due to the size of the areas involved and to the suddenness of the announcement. The Cohasset Annex, three times the size of the Depot, has a land area greater than some Massachusetts cities and is equal to two-thirds the area of the town of Cohasset. The Navy has occupied these sites for a number of years and the recent expenditure of over a million dollars for a guided missile installation seemed to indicate that they intended to continue operations.

But the Navy has publicly declared that this expenditure was a mistake. The Chief of the Bureau of Ordnance issued a statement that the Navy "will attempt to make depot facilities available for other purposes at the earliest possible date and would declare excess immediately any of the property that is unused and severable". (1)

(1) Quincy Patriot Ledger - Mar. 17, 1959

Background of the Hingham Depot and the Cohasset Annex:-

The mission of the Depot has been to receive, renovate, maintain, store and issue ammunition, explosives, and technical ordnance material. The site for the main depot in Hingham was selected in 1903 as a Naval Magazine to replace the one which had been in operation in Chelsea since the Civil War. The first ammunition was received at the Depot in 1911 and all other facilities were transferred from Chelsea to Hingham.

The Depot underwent its greatest development during World War I. By 1941 it was apparent that expansion was impossible for the increased storage requirements so it was decided that additional land should be taken nearby. Contiguous expansion was rendered impossible both by the nature of the terrain and out of respect for the interest of local property holders. So a rough and wooded area about four miles to the east of the main depot was acquired and called the Cohasset Annex.

During World War II the civilian complement of the Depot reached a high of 2,378 employees. The war ended and almost overnight production was curtailed and magazines commenced to fill with ammunition from fleet units being decommissioned. Employment dropped to 366 and remained at that level until November 1949. On receipt of Bureau of Ordnance order, the

civilian employment was reduced to 50 and the Depot was placed in a maintenance status.

With the beginning of the Korean conflict in 1950, the Bureau of Ordnance issued reactivation orders to place the Depot in full operation. As many old hands as possible were recalled and many untrained employees were hired to meet requirements. The Civilian Personnel Ceiling remained at 535 until the early months of 1959 when the Navy began a relocation program as a part of abandonment procedures.

Existing Development and Site Characteristics of the Main Depot:- The Main Depot is located on the south shore of Boston Harbor east of the Weymouth Back River. It is approximately 19 miles by highway from Boston and does not have frontage on, but is a few hundred feet from, Route 3-A with a good highway connection to all routes.

The site is located in the northwest corner of Hingham and is fairly well separated from more intimate community activities. It is bounded by water or by land of an industrial character except along its south boundary. Here residences back right up to the property line, but are separated from Depot activities by a safety buffer.

The total acreage of the Depot is 935.7 acres of which 124 acres are water and 72 acres swamp. A part of this acreage consists of a strip of land in Weymouth which is

not developed but used as a safety buffer. The remainder of the dry land in Hingham is rather intensively developed and adaptable to industrial use. There are many buildings of reinforced concrete, constructed for warehouses and storage, and will be serviceable for many years. The living quarters, mess halls, administrative building, and other miscellaneous buildings are wood-frame and adaptability to any long-term use is questionable.

The roads through the site are in excellent condition. The Depot has its own water supply and there are 138,800 linear feet of water mains installed. Two water tanks have a capacity of 200,000 gallons each. There is a sewage treatment plant with a capacity of 6 million gallons per year and a collection system with 8,000 linear feet of sewer main. There are 18.8 miles of rail trackage connecting directly with the N.Y. N.H. & Hartford Railroad, Old Colony Branch. There are waterfront facilities with berthing space for ships. Two docks, one 380 feet long and the other 750 feet long, are in good condition and the mean low-water level is fourteen feet.

In addition to buildings and utilities, there is a great deal of equipment that might be sold with the Depot, and could be ideally used in a centrally operated industrial park.

Existing Development and Site Characteristics of the Cohasset Annex:- The Cohasset Annex lies four miles to the east of the Depot. It is not easily accessible from the main highways but must be approached from the narrow local streets which existed before the Navy purchased the tract. These local streets enter the Annex at six points along its periphery - three points in Hingham, two in Cohasset, and one in Norwell. From Hingham center to the nearest point along these roads the distance is approximately two miles; from Cohasset Center, three miles; from Norwell Center, $3\frac{1}{2}$ miles; and from Scituate Center, a little more than four miles.

The area surrounding the Annex is sparsely developed. There are scattered houses around the periphery, the greatest concentration being the little neighborhood of Beechwood in Cohasset, only a few hundred yards from the east entrance. Approximately 200 acres of Annex land was formerly owned by the Trustees of Public Reservations as a part of the Whitney Woods recreation area. The Whitney Woods abut the Annex property along almost the entire length of its north boundary.

The total area of the Annex is 3,745.75 acres of which 345.75 are swamp and 5.2 acres are water. The area is

unequally distributed among the four towns in the following amounts: (1)

Hingham.....	2331 acres	- 62%
Cohasset....	824 acres	- 22%
Norwell.....	490 acres	- 13%
Scituate....	100 acres	- 3%

Previous to purchase by the Navy the land was predominantly vacant with some scattered orchards and pasture land. The local roads that traversed the Annex have been retained and kept in fairly good condition.

The Annex is now used wholly for storage of ammunition. There are a few buildings of wood-frame construction used for barracks and other miscellaneous purposes, but any future use of these structures is doubtful. The one exception to this is a reinforced concrete building near the Leavitt Street entrance, built in 1955 as an electronics testing laboratory.

Most of the structures on the site are magazines. These are underground concrete cubicles dug into the side of hills and arranged in groups throughout the site. The groups in the north section are reached by numerous rail spurs and small, narrow service roads. In the south section there are

(1) These figures are approximations and are not from assessors record or any other official source.

no rail facilities but magazines are serviced wholly by truck. The main rail spur connects directly with the N.Y. N.H. & Hartford Railroad, Old Colony Branch, about one mile north of the site.

There are water mains in the northern half of the Annex but many of these carry non-potable water as a part of the fire protection system to the magazine groups. There are sewage disposal facilities in the barracks area consisting of large septic tanks.

Much of the terrain is studded with rocky knolls and is heavily wooded. The northern part of the site has thin topsoil, as little as six inches in places. In the southern half of the site a great deal of the area has deep topsoil of thirty-six inches or more. There is a great deal of sand, coarse gravel, and boulders throughout the site. Rainfall sinks so rapidly into the coarse sub-surface that run-off presents few problems. Gravel deposits are numerous and Prospect Hill in the southwest corner of the site is an excellent source.

The swamp areas are at elevations varying from 40 to 140 feet above sea level. Many small brooks run between swamps while one large brook traverses the southeast section of the property, emptying into Bound Brook Pond. Accord Brook forms a portion of the west boundary of the

Annex and empties into Triphammer Pond in Hingham, just northwest of the site. There are two small ponds within the Annex, approximately 2½ acres each.

The forest cover consists mostly of pine, oak, swamp maple, birch, and beech with occasional hemlocks. In an effort to study possible multiple uses of military installations a Forest Management Plan was prepared by the U.S. Forestry Service and some of the land was found to contain good stands of marketable timber. Although the installations extend through the site only a negligible quantity of trees were removed in developing the site.

The Brockton Edison high tension line runs along the east property within the Annex.

CHAPTER 2. EVALUATION OF THE SITUATION AND RECOMMENDATIONS
FOR REDISPOSITION OF THE DEPOT

Differences in the Situations

The Depot and the Annex are each situations with entirely different and unique problems and opportunities. The distinguishing characteristics which set the two apart are:

(1) The relatively intensive development of the Depot- the enormous investments in improvements and equipment which are readily adaptable to civilian use- present a situation in which there is not a wide range of possibilities for reuse if the wisest and best use of the land and its potentials are to be realized. To ignore the industrial potential in the site would be a squander. The determinants of future use of the Annex are not so restrictive. The large area involved, the relatively undeveloped state and the questionable adaptability of existing development to civilian use offer a great deal of flexibility and imply more detailed research and analysis to determine the wisest and best use.

(2) The developed and contiguous parts of the Depot lie completely within one town. The intercooperation and planning, therefore, would be based more on economic and

administrative aspects of the situation than they would be on physical conditions which involve more than one political jurisdiction, as in the case of the Annex.

(3) Because of its size and location in a relatively undeveloped area, future use of the Annex could have a much greater impact on the surrounding area and on the future physical structure of the Four Towns than would the Depot, which is smaller, more remote from other community activities, and located in an area where the land use and circulation patterns are more firmly established.

Consequently, the situation of the Depot does not involve many of the issues which are necessary for the development of this thesis. Proposals for the redistribution of the Depot are included only because they are significant to the land use pattern and economy of the Four Towns and will affect recommendation concerning future use of the Annex.

Recommendations for Redisposition of the Main Depot

The proposal for the Main Depot is that this tract be operated as a centrally controlled industrial park. This installation was planned as a unit and should continue to be operated as such if maximum benefits are to be derived from existing development. The potentials and the investments in the site are too complicated to allow a free hand

and a haphazard sale of the property to random industries that might not make maximum use of the facilities, and might not return the greatest economic benefits to those areas within its sphere of influence. This sphere of influence includes not only the town of Hingham, but the metropolitan area as well.

Seasonal industries or national corporations that make decisions based on nation-wide policy and feel no responsibility to the towns, should be avoided, thereby decreasing the chances of large-scale unemployment and heavy welfare loads weakening the regional economy. Those industries that employ highly-skilled labor and contribute most to the area should be attracted. To accomplish these ends would require an agency that would undertake ambitious promotional efforts and a skill in selection as well as having funds available to launch the development and make improvements in harbors and other operational facilities.

The recommendation here is that the Depot be purchased by the Port of Boston Authority and planned and administered by this agency. Land in some of the undeveloped areas of the Depot could be leased to interested firms which would put up their own buildings. Existing buildings and standard factories built by the Authority could be leased to smaller companies. The economies of cen-

trallized planning, management and servicing combined with the flexibilities of large acreages and floor space should prove most attractive, along with the additional advantages of highway, rail and water transportation.

An agency which has had operational experience in similar undertakings, and which can employ the needed administrative and technical talent, should be used rather than to create a new and perhaps more inefficient agency at the local level. A greater source of funds would be available to this agency and it would also allow an integration of planning this industrial facility into the industrial pattern of the metropolitan area. The jobs that would be created would involve a labor force throughout the metropolitan area, and the agency administering this operation should be one responsible to the metropolitan population and not just to one town.

The planning board and townspeople in Hingham should have a voice in decisions and plans for the Depot which affect them directly. They should also be able to tax this property in the same way that they tax privately owned industrial land in the town.

CHAPTER 3. DETERMINING AN APPROACH TO THE ANNEX SITUATION

Effects of Abandonment

Discontinuance of naval operations apparently will have no harmful affect on the economy of the Four Town Area. Naval and civilian personnel contributed little to local trade; few of the townspeople were employed at the installation and the instability of employment was a detriment to those that were; and the funds received in lieu of taxes contributed very little to the tax bases. The greatest advantage to the existence of the Annex was that it retarded growth in the area surrounding it, which was the area furthest from available community facilities.

In the few months since abandonment has been announced, there has been quite a little activity. At the local level, towns have made zoning changes so that now all of the land within the Annex is in a residential zone requiring minimum lots of 40,000 sq. ft. or greater; some special committees have been set up to study possibilities for reuse; and some joint meetings between town officials have been held to discuss their mutual concern over the Annex. At the state level, a committee has been set up to investigate the State's interest in the Annex land. Indications are that real estate speculators in the area are regarding

the Annex as a very lucrative proposition.

Approaches to the Situation

First, it is assumed that the Federal Government will have no further use for the Annex. Secondly, proposals for predominantly industrial use of the Annex are so incompatible with the desires of most of the townspeople, with the general character of the surrounding area, with the regional transportation system, and with the metropolitan population distribution, that any further consideration is unnecessary.

The Annex has little more than its undeveloped wooded character and its location within the local and metropolitan framework as criteria for determining future use. There are no mineral resources, unless sand-and-gravel operations were considered in this category. Quarrying might be a possibility, but the nearby supply from existing quarries apparently supplies a diminishing demand. There is no power potential and the land has practically no agricultural value. The timber stands are such that some profits might be realized, but as a source of substantial future yields commercial forestry is not practical. (1)

(1) A report prepared for the Navy by the U.S.D.A. Forestry Bureau indicated there were areas which did contain significant stands of marketable timber, so the possibility of some commercial forestry is not completely ruled out.

Extensive survey of possible uses could be undertaken, but for purposes of evaluation the two possibilities most likely to occur under existing conditions will be considered:

- (1) the position taken by the town officials- that the land be "taken out of circulation" and used for recreational purposes
- (2) sale of land at public auction resulting in laissez-faire speculation with local zoning and subdivision controls regulating development.

Evaluation of Recreational Use:- There is a need for additional recreation land in the South Shore area. The Annex has features which make it attractive for this use, but it does not have the diversity of features usually associated with recreation development on so large a scale. Its major features are brooks, hills, and two small ponds situated on its periphery with an interior hinterland of woods. Although it would make a pleasant camping area it does not have drawing power to attract the one- or two-week camper.

If the entire Annex were assigned a recreation use, in all probability it would be under-developed and not used to capacity. Its existence might result in the neglect to acquire other available land in the vicinity with a much greater recreation potential than the Annex has.

In addition, the size and shape of the Annex itself does

not easily lend itself to serving the additional functions of recreation land, such as serving as channels through which recreation traffic moves to other features in the area, serving as green belts between the towns, and providing greatest accessibility to such accommodations as over-night camping and picnic areas for the week-end vacationists and the Sunday sight-seers. For the reason previously stated, additional land to accomplish these functions might not be acquired.

In summary, recreation is a proposal not incompatible with the needs of the region and the character of the area. But to assign to the entire Annex a recreation function would probably be due more to circumstances of its unusual ownership than to a comprehensive plan of the regional landscape. The greatest advantage of the proposal is that it would insure against the economic burdens imposed by residential development of the area by taking the land out of circulation.

Laissez-Faire Residential Development:- Of the two proposals, this one is the most frightening to the surrounding towns. The attempt to minimize the effects of speculation by one-acre zoning will help somewhat, but the towns realize the inadequacies of most police power controls and what any development of such a large area could do to their

already shaky financial structure.

A tract of this size would undoubtedly be developed by the large operator, the speculator who makes most of his profit by mass producing houses. The topography of the Annex does not lend itself to this type of operation unless the natural contours of the land, the trees, and whatever beauty remains for the enjoyment of the population, is first flattened and scraped clean.

Of more importance, the towns themselves would lose more of their individuality. As the communities grow together from their business centers outward, the coalescing would be arrested to some extent by the existence of this installation. If the land were to be sold for private development, the coalescing would not only be spreading from the centers outward but also from their fringe inward, hastening the coagulation.

Problems vs. Opportunity

It is true, of course, that these two probabilities for development need not take place, one to the exclusion of the other. A plan for multiple development of the area as a result of local planning and cooperation is possible. But planning in these suburbs, involves the preparation of a land use plan and looking to the possible police power measures and to a minor extent, tax measures as means to

carry out the plan. Face to face with more and greater problems, these measures have repeatedly proven their inadequacy to answer such questions related to undeveloped land as:

- (1) To what degree can police power be used to preserve open space or keep land open until it may be more urgently needed?
- (2) To what degree can police power measures be used to control timing and sequence of development so as to pace development in accordance with the community's ability to provide public services?
- (3) Can police power measure be used to implement land use plans for primarily aesthetic objective?
- (4) How can communities be given first right to buy land needs for public facilities as indicated on the land use plan and still play fair with the owner?
- (5) To what extent can fees be charged to create special school and park site funds as substitutes for out and out dedication?
- (6) Can it be arranged to permit temporary uses of land to enable owners to earn fair returns until such time as the land is ripe for assigned permanent use?

These and many other questions will be answered in the future by decisions of the courts until they have been established as planning controls. During that time, much of the undeveloped land will have been brought into use without benefits of these or like controls. The Cohasset Annex has created two extremely unique problems and opportunities in

this regard:

(1) If present planning controls are inadequate, to suddenly have acreages of this magnitude opened as potential areas for development could completely change, or possibly destroy the middle-class residential character of these communities. The communities, merging into one residential mass, might suffer economic annihilation as the result of the cost of providing municipal services for these new residents. The end result could be a contribution to the confusion and congestion of an already unsatisfactory metropolitan environment.

(2) To have such a large tract of land made available could be one of the greatest opportunities these communities will ever have to change and to create an environment of good living while, at the same time, solving most or all of the planning limitations previously listed as related to the Annex. In addition to environmental benefits, the financial and political structures of these communities could be strengthened in such a way as to make it possible to solve many future planning problems effectively. Federal ownership of the land could mean that the government, which has supported and encouraged local planning in the past, might likewise support a proposal for public ownership by the Four Towns of the Annex land

in the interest of promoting regional planning. A logical proposal and General Plan endorsed by the Four Towns and submitted to the Federal Government might disqualify all other proposals for redistribution of the Annex.

CHAPTER 4 - RECOMMENDATIONS FOR REUSE OF THE ANNEXGeneral Policy

Proposals for reuse of the Annex must be in scale with the magnitude of the situation. The size of the tract, its location in Four Towns, and the other circumstances which surround it necessitates a proposal that diverges from the more conventional approach of suburban planning policy - disregarding regional implications and hoping that the sum of the parts will add up to a whole. The Policy proposed here is:

- (1) The Four Towns purchase the Annex land and jointly plan for its development as a new community within the Four-Town Area.
- (2) The General Development Plan for the new community would be a compromise of the needs and the objectives of the Four Towns as well as needs of the metropolitan region.
- (3) The General Development Plan would be set up in stages and, as each stage is ready for development, a precise plan having the status of an official map will be prepared.
- (4) The areas of the new community which would be developed by private enterprise would be sold with controls as

established by the official map and protective covenants.

- (5) The new community would be run initially as a special district and administered by a special board with equal representation from the Four Towns. Initial agreements between the Towns would be on a contractual basis, with the ultimate objective a reorganization (possibly federation) of the political structures with each of the five units (Four Towns and the new community) retaining local autonomy on matters best controlled on this level while Area-wide functions would be assigned to a central administration located in the new community.

Basic Objectives Are:

- (1) to bring the Four Towns together in a cooperative effort by providing the common denominator which would lead to reorganization and, consequently, greater efficiency and self-reliance, rather than an increasing reliance on the surrounding region and on higher levels of government.
- (2) to preserve the semi-rural character of the Area and to protect the Towns from an internal sprawl.
- (3) to encourage and promote the functioning of these communities as a recreational playground for a metropolitan area, making facilities available with a minimum

of interference with community living while utilizing the Areas's greatest natural resource - environmental amenities and ocean frontage.

- (4) to provide a system of circulation that would permit greater accessibility to recreational and regional facilities, thereby improving the over-all circulation pattern.
- (5) to provide a new community that would serve as a demonstration of desirable environment and act as a stimulant to the public in demanding similar standards in other areas.
- (6) to provide space for regional institutional uses needing large acreages, a degree of seclusion, and that would benefit from the amenities of the Area.
- (7) to provide space for residences, stages for development so as to act as a regulator for Area-wide growth and to channel the maximum growth into areas in accordance with a plan for development of community facilities.
- (8) to provide space for a variety of housing accommodations, especially of a type not now provided in the Area, so as to meet demands of a changing age-structure.
- (9) to keep a feeling of openness and natural beauty within the community by forcing development to conform to the nature of the land rather than to the dictates

of economies of mass construction.

- (10) to keep land in reserve and to locate those uses most apt to expand beyond planned capacities adjacent so that flexibility will be permitted to meet unexpected and unpredictable conditions.
- (11) to provide a centralization of services and administration enabling the communities to have the advantage of facilities and services they would not be able to provide for themselves individually or, if so, at a much greater cost; to provide these facilities so that they will be readily accessible from all parts of the Area.
- (12) to allow the communities to benefit from the sale of the land by receiving profits from increments resulting from community improvements and rising land values - a benefit which ordinarily goes to the real estate speculator.
- (13) to increase the taxable resource of the communities by providing space for commercial recreation uses that are of a character consistent with the desired development.

PART II - SURVEY AND ANALYSIS OF THE FOUR-TOWN AREA

CHAPTER 5. FOUR-TOWN REGIONAL ORIENTATION

Location.

The Four Towns are located in an area commonly referred to as the South Shore cities and towns with Boston as a reference point. Hingham, the town closest of the four to Boston, is approximately fifteen miles by highway; Scituate, the most distant, is approximately twenty-five miles. The area is bound on the north by the Atlantic Ocean and the small peninsula-town of Hull; on the east by the Atlantic; on the south by the towns of Marshfield, Pembroke and Hanover; and on the west by Rockland and Weymouth.

Political Districts.

All the towns are in the same Congressional District and all, except Norwell, have the same representation on the State level. Hingham, Scituate and Norwell are located in Plymouth County. Cohasset, for some strange reason, is a part of Norfolk County although it is not contiguous to any part of it.

Special Districts.

Hingham and Cohasset are in the area included among the 48 cities and towns which receive some service from the M.D.C.

(Metropolitan District Commission). The M.D.C. was set up in the latter part of the 1800's when the need for integrated services, such as sewer, water, and park systems, became a necessity for the densely populated area formed by Boston and surrounding communities.

There are at present 46 municipalities which use one or more of these three services provided by the State through the M.D.C., with each community assessed yearly for the amount of service received. Cohasset is in the Parks District only, while Hingham is in both the Parks and Sewerage Districts.

Hingham and Cohasset are also included in the Boston Metropolitan Area. This Area, as defined by the Bureau of Census of the U.S. Department of Commerce, includes 65 communities which are socially and economically integrated with the Central City. (1)

The fact that two of the towns are included and two excluded from the metropolitan area is due to the arbitrariness of criteria. Any great differences in degree of social

(1) The criteria in determining metropolitan areas used by the Census Bureau are (a) population density of 150 or more persons per sq. mi., or 100 or more persons per sq. mi. where strong integration is evident; (b) average of four or more telephone calls per subscriber per month from the contiguous municipalities to the central city.

and economic dependency between any one of the Four Towns and the central city would be difficult to distinguish. As "bedroom towns" for the central city, comparisons between the Four-Town Area and the Metropolitan Area are of considerable significance - the regional picture widely influencing the growth and economy of the localities.

Regional Setting.

The Boston Metropolitan Area fans out from the central city in an irregular semi-circle with an average radius of approximately eighteen air-line miles. Physiographically this region is called the Seaboard Lowlands, characterized by lower elevations and smoother topography than the Eastern Upland to the west.

The coastline of the Boston Metropolitan Area reaches around Massachusetts Bay for a distance of 337 miles. The variety of the topography of this coastline is one of the most distinguishing features of the area. Rock-bound coasts vary with salt marshes and sandy beaches. This variety of coastal land provides scenic recreation areas and harbors for development of ports and valuable fishing grounds. These features of the landscape are those which characterize most of the Four-Town Area.

Regional Economy and Interrelations.

The two most vital factors in the swift and successful

colonization and industrialization of the Metropolitan Area were an abundance of both water power and marine resources. Great natural harbors and rivers gave impetus to the rapid rise of one of the area's earliest and greatest industries - shipbuilding. The greatest development first took place on the North Shore, but today Quincy's Bethlehem Yard on the South Shore is the great remainder of the shipbuilding industry and has become one of the world's outstanding plants. An extension of it, which has closed down since the end of World War II, was located in Hingham.

As a result of shipping dominance and power potential the Area became a leading textile center as well as a center for such industries as printing and publishing, rubber goods and footwear, chemicals, paper and allied products.

The recreation and cultural activities are many and varied and attractions beckon the tourist to this area clothed in historical significance.

Despite the movement of people and much of the industry and retail trade to the suburbs, the central city still remains as the vital core. It is a medical center, insurance and banking center, a transportation center, and an educational and cultural center for not only the Four Towns

but for the metropolitan region and a good part of New England as well. In addition to providing services of this sort and being a center of employment for a great many of the white-collar workers in the Four Towns, the city also provides a glamor and atmosphere of excitement not duplicable in the small town, but which is a vital element in the lives of the suburbanite. In contrast, the Four Towns and similar areas offer an atmosphere conducive to relaxation and recreational activity to the urbanite.

CHAPTER 6. HISTORY AND BACKGROUND

This area was settled shortly after the landing of the Pilgrims and each of the Four Towns was mentioned in the Plymouth Colony Records. Hingham was incorporated in 1635; Scituate in 1633; Cohasset in 1775; and Norwell in 1888.

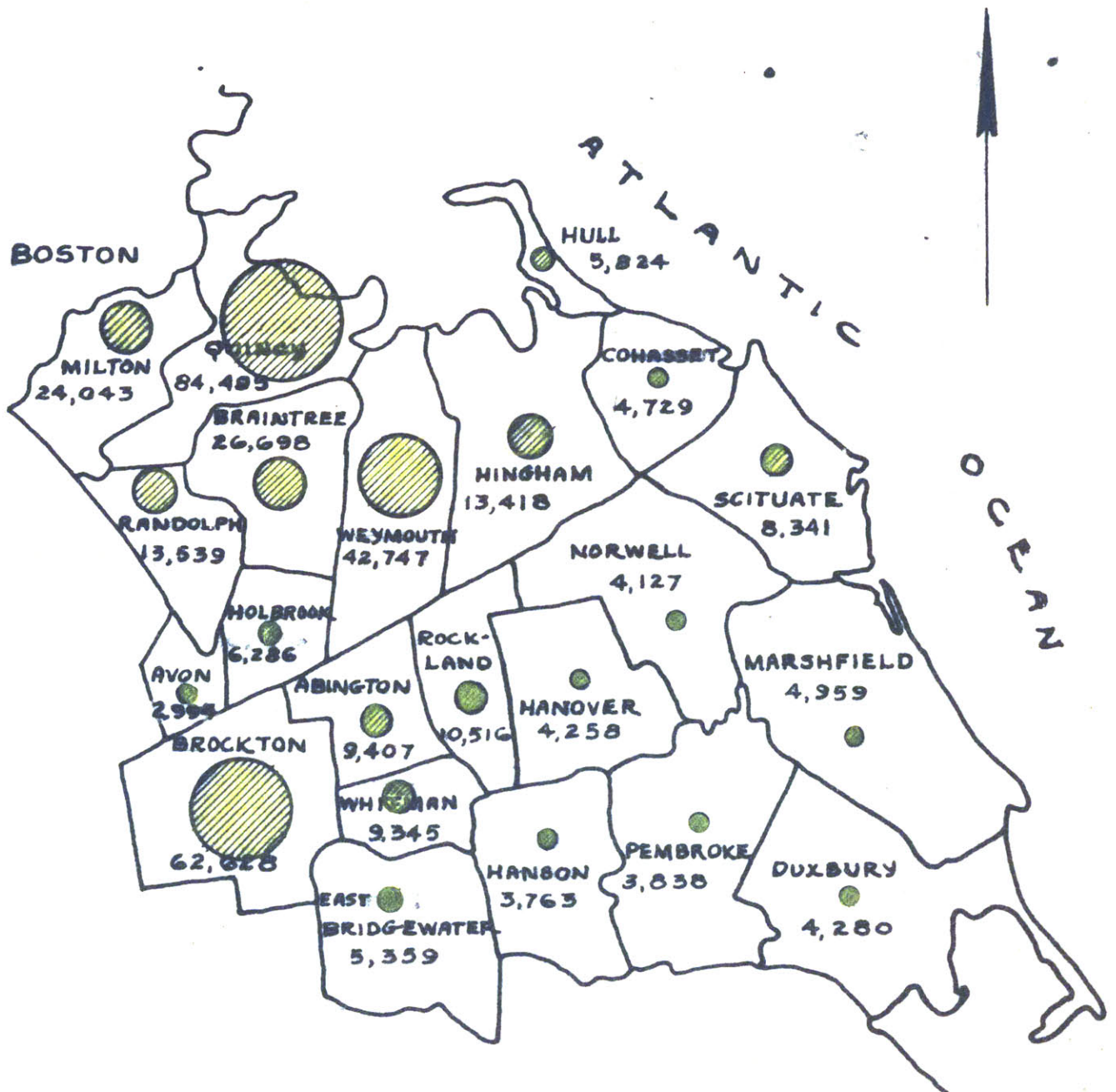
The early economy, even that of Norwell which has no ocean frontage, was closely related to the sea. All of the Four Towns were active fishing and shipbuilding centers. All, except Norwell, were prosperous harbors when water was a major form of transportation and many small industries located in the towns so as to be near a shipping point.

Whaling ships were built of native white oak, many of them manned by the townspeople. There were many saw mills and wood-products industries, such as trunk and box factories; iron and copper products were important activities and such items as tacks, hammers, nails, hatchets and guns were turned out. The port of Scituate was of considerable commercial importance and an unusual industry called "mossing" was conducted there, using an algae for brewing, dying, gelatin and several other purposes. Hingham was a leading center for salt and shipped nation-wide.

As shipping declined in importance and as the industries

became extinct, due to obsolete products or production methods, the townspeople relied partly on farming and fishing, but many of them were the old wealthy families of the previous shipping era and the earliest suburbanites commuting to Boston by train. Population figures remained steady or rose slowly until the post-war period. With increased building activity after the war, much of the vacant land was built on and many of the old estates were subdivided. But it was not until 1950-1955 that population figures began to show their sharpest trend upward.

Taking into consideration their early commercial importance, the towns today have very little industry. They are primarily residential communities - "bedroom towns" with white-collar commuter population. One of the area's greatest natural resources is still the ocean but because of its recreation potential rather than for commerce. Although most of the ocean frontage is blocked by private residences and the harbors need improvement and enlargement, people flock to the area during the summer months to use the limited available recreation facilities.



POPULATION DISTRIBUTION IN SOUTH SHORE TOWNS
-1955-

Source: 1955 State Census.

CHAPTER 7. POPULATION AND HOUSING

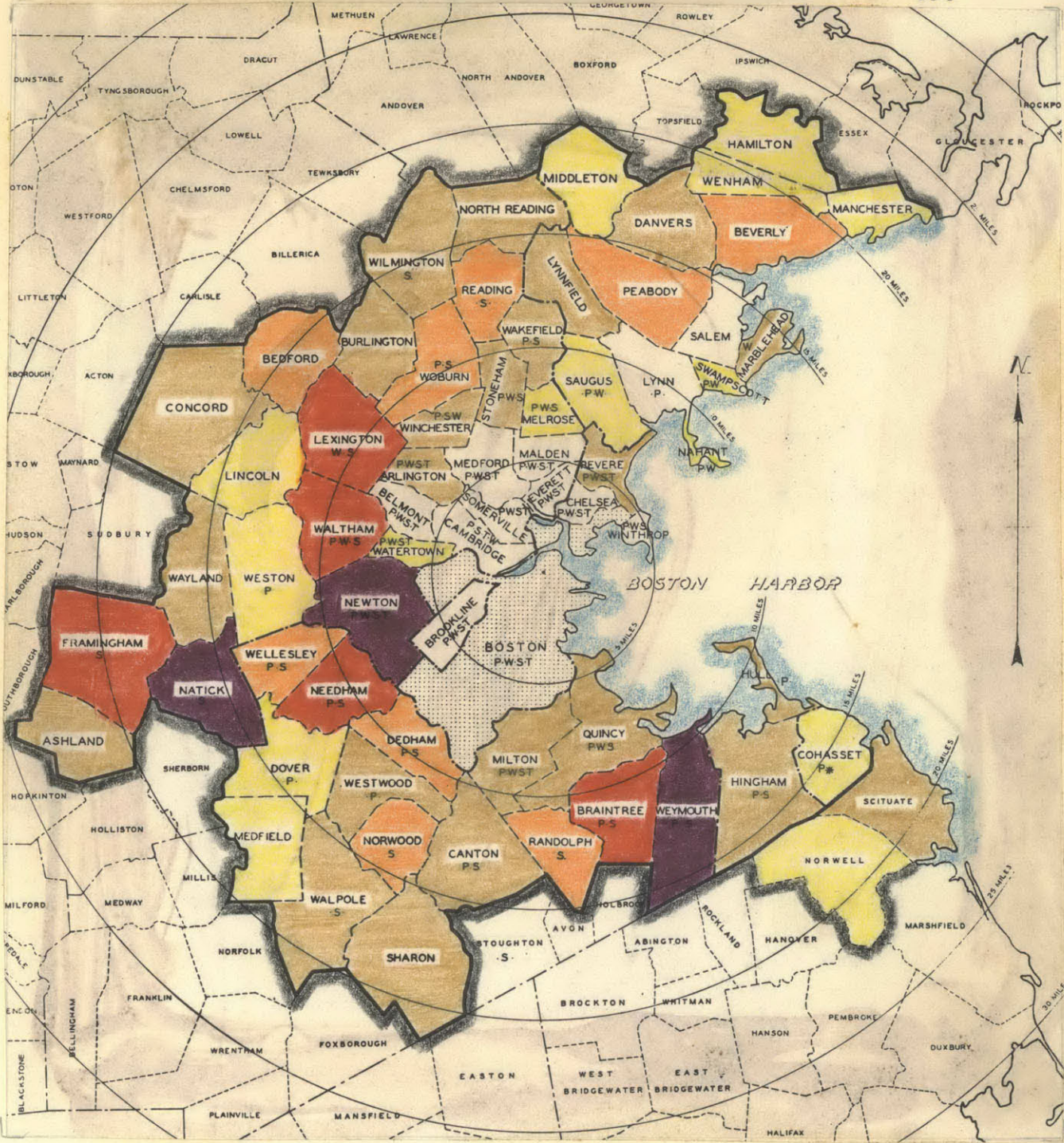
General

The kind of people, their distribution throughout the Four-Town Area, the rate of growth, and the type housing available are all factors which will be determinants in proposals for the Annex. On the basis of original figures from Federal and State Census it is usually possible to make some forecasts of future population relevant to physical conditions. Knowledge of existing land use, the planning objectives of the communities expressed in their zone plans, and the amount of buildable and vacant land form the framework around which these projections of past growth trends must be fitted.







Detailed and refined techniques are not within the scope of this study. It is necessary here to rely somewhat on past studies and to use some of the crudest, but most accurate methods, resulting in figures that will give the proposed plan a reasonable scale.

Relative Population Change

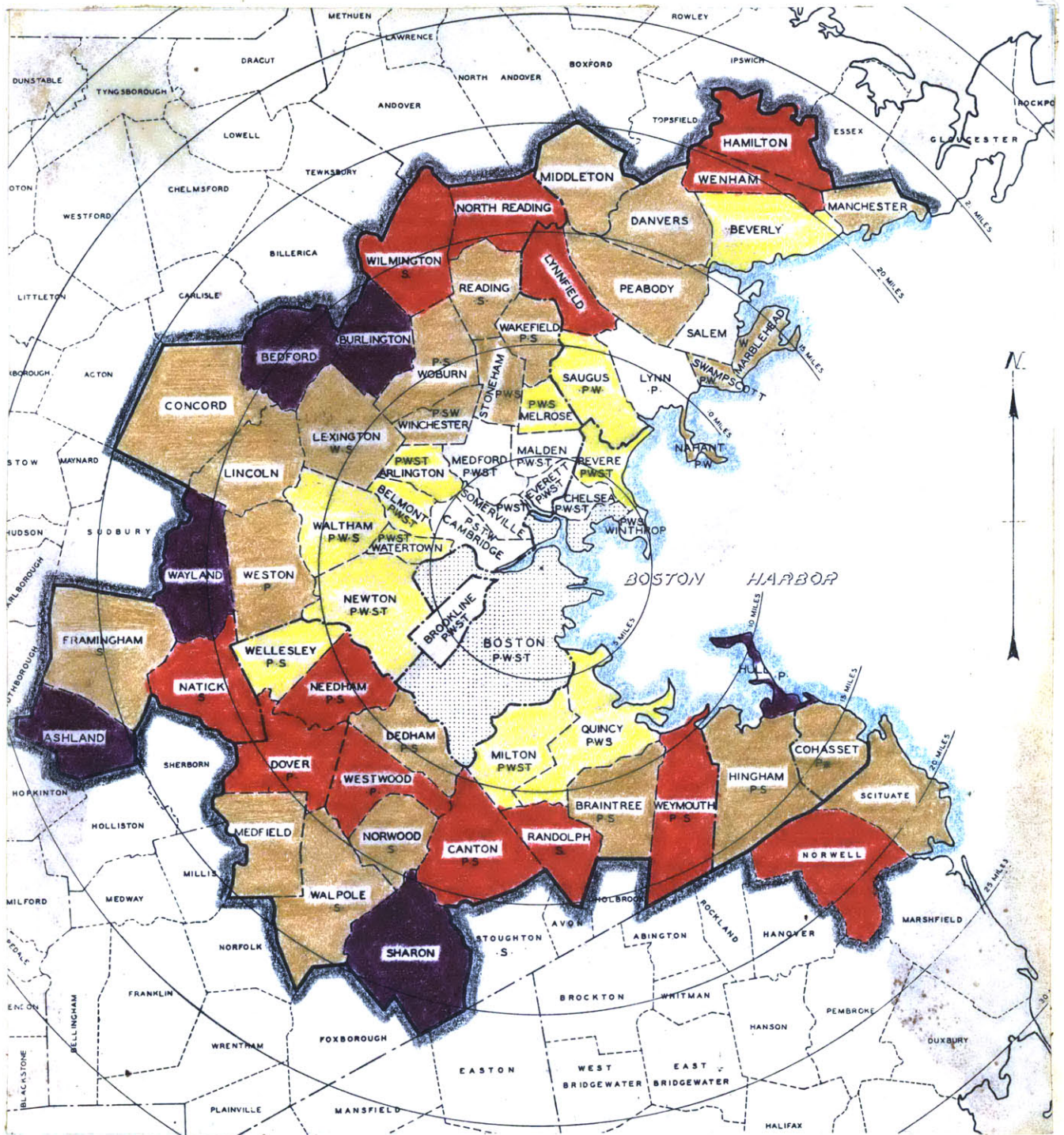
As the maps on page 49 and 50 show, the Four Towns are undergoing a change comparable to other suburban towns on the fringe of the more built-up parts of the metropolitan area. Although the South Shore Towns as a whole have not



NUMERICAL POPULATION CHANGE - 1945-1955
of the
FOUR-TOWN AREA AND THE METROPOLITAN AREA

	8,000 & over		2,000-3,999
	6,000-7,999		0 - 1,999
	4,000-5,999		Loss of population

Source: Commonwealth of Mass., Department of Commerce,
Division of Planning.



PER CENT CHANGE IN POPULATION - 1950-1955
of the
FOUR-TOWN AREA AND THE METROPOLITAN AREA

- 50% & Over
- 30% - 49.9%
- 10% - 29.99%
- 6% - 9.99%
- Loss of Population

Source:- Commonwealth of Mass., Dept. of Commerce,
Division of Planning

received as much of the total metropolitan growth as the towns west of Boston have, they have received considerably more than have the North Shore towns. Opening of the South-east Expressway should do much to hasten the rate of residential development in the South Shore area.

The following table shows the percentage increase during a 25-year period of the individual towns as compared to the Metropolitan Area.

Percentage Increase in Population - 1930-1955

<u>Metropolitan Area</u>	<u>Hingham</u>	<u>Scituate</u>	<u>Norwell</u>	<u>Cohasset</u>
11.9%	100%	167%	171%	53.4%

This growth change in the bordering towns during the same 25-year period is as follows: Hull-52%; Weymouth-125%; Rockland-41%; Hanover-52%; Pembroke-155%; Marshfield-205%.

The percentage of the metropolitan population that is living in the Four-Town Area is becoming increasingly greater. In 1920 only 0.66% of the metropolitan population lived in the Area; twenty-five years later this figure was 1.28%. If this trend continues, 2.55% of the people who live in the metropolitan area will be living in one of the Four Towns by 1975.

Population Growth

The population of the Four-Town Area has increased from 17,115 in 1940 to 30,615 in 1955. This is an increase of

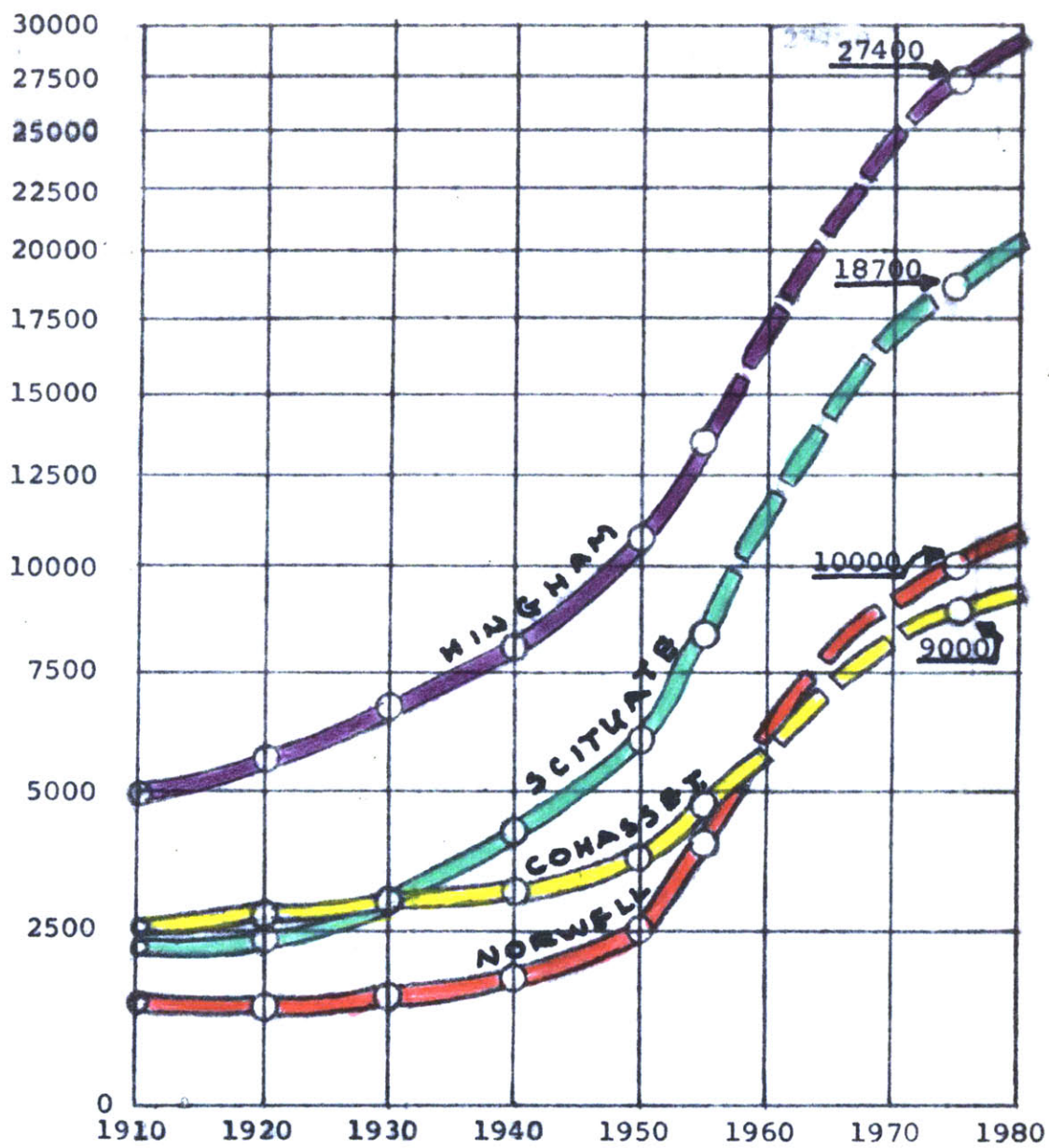
almost 80% in a fifteen-year period. If the Area continues to grow at this same rate, the population will be 34,500 more or a total of 65,115 by 1975.

The Towns have not all increased at the same rate, as the graph on page 53 shows, but the rate for three of them has been quite similar. Cohasset's growth has lagged and will probably continue to do so. This town has less than half the land area that Norwell and Hingham have and less than two-thirds that of Scituate. A great deal of what it does have is in public ownership.

Rate of Growth for Four Towns: 1940-1955

	<u>Increase</u>	<u>Rate</u>	<u>% of Area Total</u>
Hingham	5,415	68%	40%
Scituate	4,211	100%	31%
Cohasset	1,618	52%	12%
Scituate	2,256	120%	17%

If each town were to receive a percent of the Area's total growth proportionate to what it has received in the past, the estimates for 1975 would be as shown in the table below.



FOUR TOWN POPULATION TREND

	<u>1955 Population</u>	<u>20-year increase</u>	<u>1975 Population</u>
Hingham	13,418	14,000	27,418
Scituate	8,341	10,400	18,741
Cohasset	4,729	4,200	8,929
Norwell	<u>4,127</u>	<u>5,900</u>	<u>10,027</u>
total	30,615	34,500	65,115

This estimate of 65,115 persons in the Four Town Area by 1975 is a reasonable one when compared to the larger geographic unit - the metropolitan area. Statistics for metropolitan population show that if this area increases at the same rate it did between 1950-1955, the metropolitan population would be approximately 2½ million by 1975. If the Four-Town Area has 2.55% of this population, as previously mentioned, it would have a population of 64,000 by 1975. If the metropolitan area continued to increase at the same rate that it has from 1940-1955, the population would be approximately 2,700,000 and the consequent Four Town population would be 67,500 by 1975.

The short-range rate for the metropolitan area is apt to be the more accurate estimate, as the decentralization of the central area and rapid filling in of the outlying areas is sure to mean a levelling off from 1955-1975.

Growth Potential and Holding Capacity

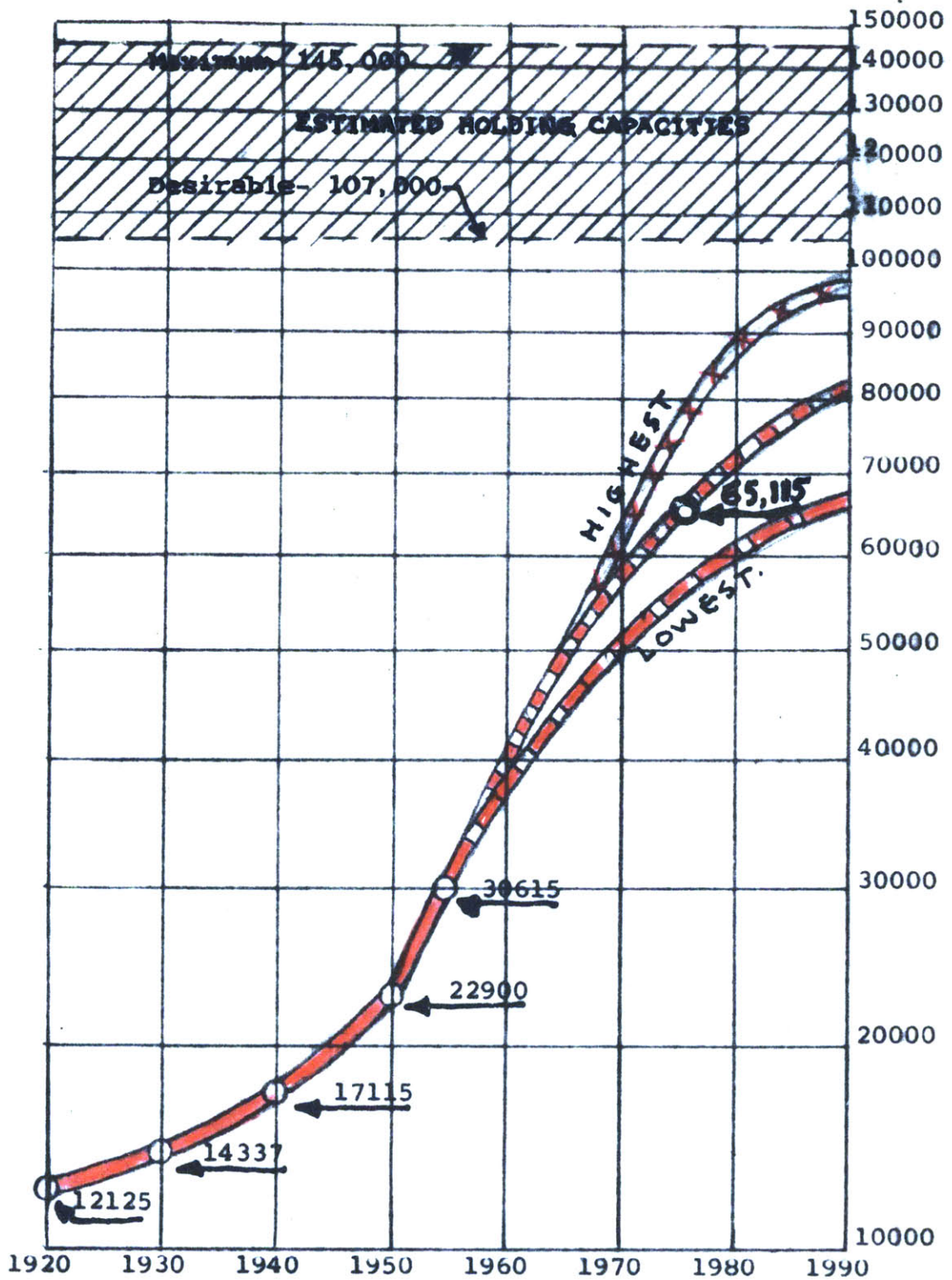
The growth potential of the Four-Town Area can be gauged somewhat by a knowledge of the amount of vacant and buildable land in the towns zoned for residential use.

Vacant and Buildable Residential Land (1)

	<u>Total Area in Town</u>	<u>Vacant & Buildable</u>	<u>% of Total</u>
Hingham	14,445 acres	6,100 acres	42%
Scituate	10,925 "	5,250 "	48%
Cohasset	6,438 "	2,063 "	32%
Norwell	<u>13,447 "</u>	<u>8,462 "</u>	<u>63%</u>
total	45,255 acres	21,875 acres	48%

The minimum lot size requirements in the zoning districts help in determining what the holding capacities of this potential residential land might be. The zoning map (separate cover) shows these various districts. A very rough calculation would indicate that a reasonable maximum ultimate growth for the Four-Town Area might be an average of 1.5 families

(1) With the exception of Hingham these figures were derived from the available information in the 701 studies. The figure for Hingham is my own estimate based on computations from the generalized land use map prepared from field study and other sources.



FOUR-TOWN AREA POPULATION TRENDS
as Related to Holding Capacities

per gross acre. This would result in a total of 32,800 additional families or 115,000 more people.

Assuming that large acreages would be reserved for recreational use and that the land will not develop to an ultimate maximum, one family per gross acre would be a more desirable over-all future development density. This would mean a total of 76,500 additional persons.

In terms of total population, using this ultimate and desirable increase, there would be a range of from 107,000 to 145,000 persons living in the Four-Town Area. As the graph on page 58 shows, if the rate of growth from 1950-1955 were to continue, the Area would be approximately 15,000 short of the lower ceiling by 1980.

Natural Increase and In-Migration (1945-1955)

The Four-Town Area had a higher birth rate and a slightly higher death rate than the Metropolitan Area in 1954.

	<u>Four Towns</u>	<u>Metropolitan Area</u>
Birth Rate*	26.5	18.4
Death Rate*	9.2	8.9

From 1945-1955 72% of the Areas growth was due to in-migration while 28% was due to natural increase.

* The rate is the number of births and number of deaths per year per 1,000 persons. Information is from Mass. Dept. of Commerce, Monographs #121, #131, #140, and #155.

Population Characteristics

The graphs on page 59 show some of the Four Towns' most prominent population characteristics. The Four Towns do not differ too widely from the larger regions except in the level of education and composition of the labor force. The Four Towns have a very high level of education and more than 55% of its labor force are employed in "white collar" occupations as compared to approximately 42% for the State. There is an average of about 8% of the Areas labor force employed as operatives in comparison to more than three times this percentage for the State.

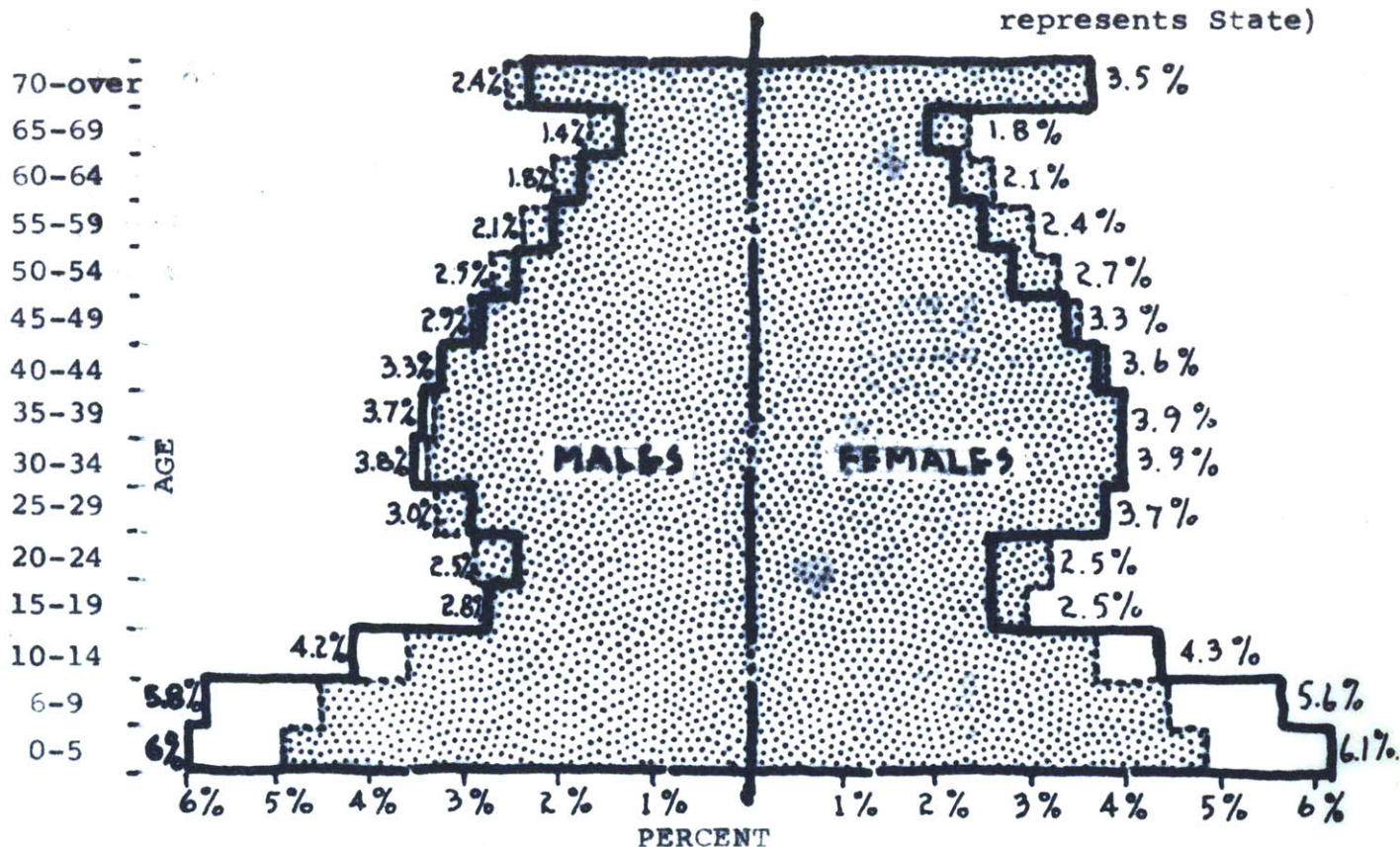
The age-sex composition pyramid for the State and the Four Towns shows the greatest difference at the 0-9 year old age level. This greater number of children is also reflected in the higher fertility ratio of 687 in the Four-Town Area as compared to 538 for the State.(1)

Labor Force:- Most of the labor force are commuters. In 1955 there were 3,522 persons employed in firms located in the Area as reported to the Massachusetts Division of Labor Security. According to the 1950 U.S. Census 35.2% of the total population in the towns was in the civilian

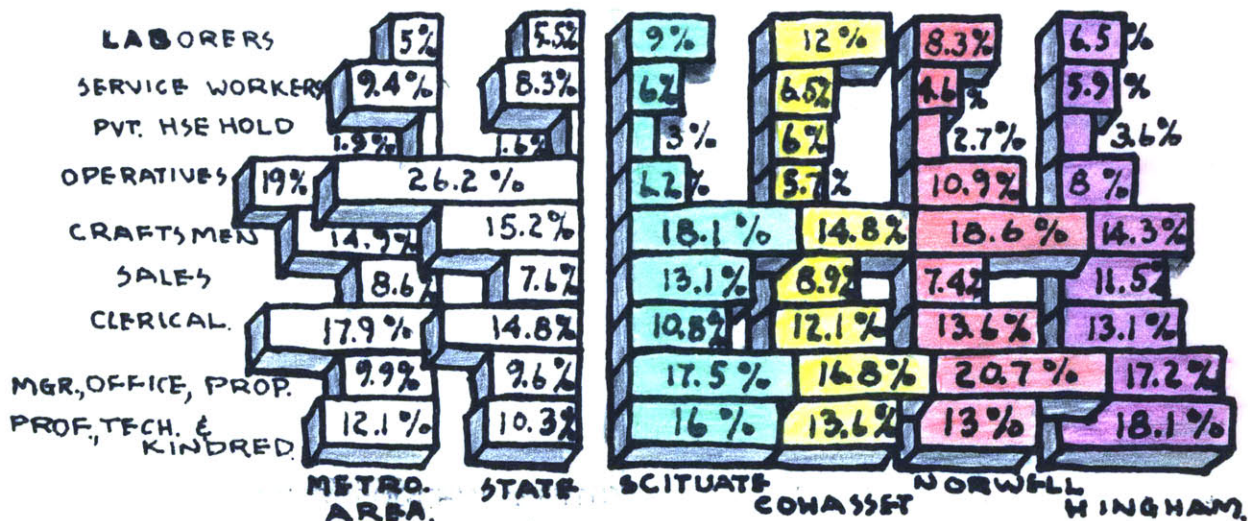
(1) Ratio is number of children under 6 years old per 1,000 women in the 20-44 year old age bracket. Standard ratio is usually only those children under 5 years old, but statistics were not easily available to compute on this basis.

AGE-SEX COMPOSITION OF THE FOUR-TOWN AREA AND THE STATE

Source: State Census of Population- 1955. (Shaded portion represents State)



TYPE OF EMPLOYMENT - 1950 (No. of people in each occupation expressed as a percent of the total workers in each community)



labor force. Assuming this same percentage would still apply to the 1955 State Census population figure there would be a civilian labor force of 10,775 persons in 1955.

If all the persons working in the Area also lived in the Area, there would still be a total of 7,233 persons commuting to jobs outside the towns, or approximately 70% of the labor force.

Housing

The following table shows the housing conditions and type occupancy in the Four Towns and in the State and Metropolitan Area:

Housing Conditions and Occupancy: Source-1950 U.S. Census

	<u>Metro.</u>	<u>State</u>	<u>Hingham</u>	<u>Scituate</u>	<u>Cohasset</u>	<u>Norwell</u>
% dilapidated or substandard	10.4%	13.7%	5.5%	7.4%	6.5%	20.3%
% single-family detached	33.0%	40.6%	81.4%	94.6%	88.6%	92.5%
% vacant and available for occupancy	1.0%	1.0%	1.6%	0.7%	1.2%	15.2%
% owner-occupied	44.5%	47.9%	73.6%	80.3%	73.6%	85.9%

The median value of single-family dwelling units as computed by the U.S. Census in 1950 for Hingham, Scituate, Cohasset and Norwell, was \$12,405, \$10,420, \$13,308, and \$8,982 respectively as compared to \$10,878 for the Metropolitan Area and \$9,144 for the State.

The percentage of substandard structures in the Four-Town Area is approximately one-half of that percentage for the State and Metropolitan Area. The exception to this is Norwell with a very high degree of dilapidated units. Housing in the area is predominantly single-family, owner-occupied residences with a vacancy rate comparable to that of the larger regions. With the exception of Norwell, the median value of single-family units is the same as or higher than the median value of the larger regions.

CHAPTER 8 - GENERAL TOPOGRAPHIC AND SOIL CONDITIONS

The topography and soil conditions are factors which have influenced land use and circulation patterns from the very beginning of the development of these communities.

Hingham - Terrain is fairly level with some slight elevations of about 100 feet above sea level. Soil is a mixture of sandy loam with some wet and moist areas, but of good texture, scattered in the south and central section. There are some rough and stony soils along the east section. Consequently the northern section of the town has developed the most intensely with the remainder of the town characterized by sparse residential development with roads running along the highland.

Scituate - Terrain is level along the coast line on the east, rising to slight elevation of about 100 feet along the western section. Soil is a mixture of wet and moist and of good texture.

Cohasset - Generally low and rolling with elevation from 50 to 100 feet above mean sea level. A higher ridge crosses the town from northwest to southeast with elevations up to 165 feet. Soils of the ridge are of good texture and well watered, while those of the lower areas are somewhat stony with wet areas.

Norwell - Rolling countryside with elevations rising to about 100 feet above sea level. The town is scattered with moist areas and some rough and stony land along the north.

CHAPTER 9 - GENERALIZED LAND USE PATTERNS

General

The predominant use of the land in all four of these towns is residential. As has been mentioned in a previous section, there is ample room for growth and most of the buildable vacant land has been zoned for future residences, generally on large lots and of single-family occupancy. Relatively little of the area has been considered as potential sites for industrial use.

Hingham and Cohasset have easily distinguishable central areas where the majority of the businesses and town offices are located. Scituate appears to have no strong center of gravity, but rather is divided into four sub-areas; North Scituate, Scituate Harbor, Scituate Center and Greenbush. (1) Norwell is more rural in character and has a small town center with residences strung out along rural roads in a somewhat discontinuous pattern.

(1) Another section of Scituate, known as Humarock, lies to the south. This is a narrow peninsular paralleling the neighboring town of Marshfield. The ocean long ago cut off any physical connection between Humarock and Scituate and access to it is through Marshfield. For practical purposes this strip of land is generally excluded from this survey and analysis. The physical relationship is slight and it continues to be a part of Scituate mainly because taxes received from summer residences are in excess of town expenditures for services provided.

Residential Areas

In the three coastal towns the greatest concentrations of residences and the oldest sections are strung out along the coast. In Hingham and Cohasset some of these residences were large estates, many of which have been subdivided since the end of World War II. In Scituate the coastal area north of the Harbor is predominantly summer homes, many of which are being converted to year-round residences. A great many of these summer residences are old and unkept, although apparently structurally sound. They are built on small lots and give the entire area a look of congestion while shutting off views and access to the ocean. South of the Harbor the homes are of middle-class character and are year-round residences.

Between Rte. 3-A and this coastal development is an area of predominantly post-war subdivisions. South and west of Rte. 3-A in Scituate and Cohasset and bound in Hingham by High Street is an area of discontinuous and sparse development. This area includes all of the town of Norwell and the land surrounding the Annex.

Zoning for residential uses in the Area is quite consistent among the Four Towns. Small areas, consisting of the older, built-up sections, are zoned for 10,000 sq. ft. lots. Most of the area is zoned for 20,000 and 40,000 sq. ft.

lots up to a maximum of one acre.

Commercial Areas

Hingham has the largest business center in the Area, which includes retail establishments in old but well-kept buildings and a fairly large public parking area. There are a great variety of commercial establishments providing most items the townspeople might need, but these are small outlets and selections are undoubtedly limited. The center, for the most part, is strung out along one street and there is little chance of expansion without removing a great many of the residences which surround it. There is a smaller commercial center just south of the main center serving mostly neighborhood needs.

Cohasset has a small and congested center. The topography here makes it difficult to widen the main thoroughfare leading into it and large volumes of traffic during certain times of the day are slowed down by vehicles maneuvering into the angled-curb parking spaces along it. A public parking area has been provided behind the business blocks but this is seldom used to capacity and shoppers prefer to spar for available curb spaces closer to the stores. Most of the stores are similar in character to those of Hingham - small but providing a variety of outlets.

Scituate has two commercial centers. The Harbor Center

is the oldest and more obsolete. There are many small outlets strung along a too-narrow street. A large paved parking area is adequate for most of the year, but becomes over-crowded during the summer months. A plan for future expansion and improvement of this center has been prepared which could make it the most attractive and convenient in the town, as well as attracting some trade from Marshfield. The North Scituate business center is a fairly recent development with a large super market and other outlets serving this north part of town and south Cohasset.

Norwell has one small commercial area in the center of town and another small area along Rte. 3 which serves some local needs as well as receiving highway trade.

A few larger outlets have built on locations outside the center along major highways where they can provide adequate parking and draw from several towns. Most of the zoning for future commercial uses is along these locations. The tendency has been for ribbon-development to result.

For major purchases the townspeople have to rely on outlets in Quincy or Boston. The proposed South Shore Regional Shopping Center in Braintree will undoubtedly draw most of this trade in the future.

In summary, the scattered small business centers are obso-

lete in regard to modern marketing techniques and do not lend themselves to any major redevelopment. They can be improved to some extent but as separate centers they do not serve a trading area large enough to provide the variety that most of the townspeople demand except for convenience shopping. On the other hand, these centers provide a quaintness and the small stores have an intimacy that appeals to many of the suburbanites.

Industry

There is little industry in the Four Towns, at least not enough to categorize the area as an employment center. The area in the northwest corner of Hingham does have some extensive development which includes the Bethlehem Shipyards, (1) the Naval Depot, and some recently constructed laboratories and manufacturing plants. This area is contiguous with a belt of industrial land across the river running along the waterfront in Weymouth and Quincy. The other towns do have some industry but none of any great significance.

Scituate has no provisions for future industry in its zone plan and does not desire any more industry in the town. Cohasset has zoned a large area south of Rte. 3-A for com-

(1) The Bethlehem Shipyards closed down after the war but is now leased out to various firms for warehousing, light industry, wholesale merchandising, and discount stores.

mercial use, which would permit some light industry. The topography of this area makes any extensive use for industry questionable. Norwell has not zoned for, but has designated an area close to the proposed extension of the Southeast Expressway that could be zoned for industry in the event that a desirable firm made an offer. In addition to an industrial zone in the northwest section, Hingham has zoned another area for industry where the Southeast Expressway cuts across its southwest corner. This area has excellent potential as industrial land and, if the rate of development along this Expressway is similar to that which occurred along Rte. 128 Circumferential, this section of the Four-Town Area could become an industrial site of some significance within the next few years.

CHAPTER 10 - COMMUNITY FACILITIES AND SERVICES

Education

Each of the Four Towns has a full complement of public school facilities, providing for education through high school; all are either building or planning for new schools to serve their increasing enrollments within the next few years. Like most suburban communities, providing adequate school facilities has been and, will continue to be, the major expenditure which keeps their indebtedness so high. Their small size and limited finances impose limitations on their educational services. Specialized functions which are often provided in city schools, requiring employment of high-salaried specialists, expensive equipment, and more complex administration cannot be provided in these towns unless possibly accomplished as a regional service.

The current problem of inadequate facilities for higher education facing the State is especially relevant to this Area, which has a higher percentage of students going on to college than most other areas of the State.

Town Buildings

With the exception of Scituate, the towns have small town offices, most of which are in need of major repair or expansion. The buildings are old and obsolete. In the case of

Cohasset, an abandoned building no longer suitable for its intended purpose, has been made to serve as the administrative center for the town. Hingham's town office building, located in the business center, provides little off-street parking and is so located as to make future expansion difficult.

Norwell is planning for expansion - more parking by 1960, a new central fire and police headquarters sometime after 1962, and a town hall addition, town garage and library within the next six to ten years. Scituate has recently completed a new town building, police and central fire station with adequate site for expansion which should take care of its needs for some time to come.

Other Community Facilities and Services

Briefly, each one of the towns has one or two small libraries. Recreation serving local needs for the most part is related to the school program and facilities are on the school sites, the exception usually being little-league ball diamonds. Two of the towns have community recreation buildings in temporary structures. The towns provide some public health services but there is no community hospital in any of the Towns. The nearest facility is located in Braintree and this is often overcrowded.

Water and Sewer

Except for a section of Hingham which is served by the M.D.C. sewerage system, the Four Towns rely mainly on septic tanks and cesspools for sewage disposal. Pollution of ocean inlets and other serious problems are constantly arising as a result of present practices. The more built-up areas are running into sewage problems and recommendations for future disposal are being considered. Cohasset has had a recent survey and cost estimates prepared, and the town officials realize that unless an up-to-date system is provided soon the State might force them to do so. Lot-size requirements in most of the newer areas forestall problems of sewage for the time being at least.

Water is mainly from under-ground sources, although there are some surface sources. Each town supplies its own water, with the exception of Norwell, relying for a part of its supply coming from Hanover. The supply in the towns is apparently adequate throughout most of the year, with the exception of Cohasset. A future supply of water is a problem in this town and proposals have been made to tie in with the M.D.C. system. Objections to this proposal are practical because, unless other towns along the route would share in the plan, Cohasset would have to bear the entire expense of installation. It is unlikely that other

towns will participate because their needs are not critical and they are producing water at a much lower cost than rates charged by the M.D.C.

A complete coverage of community facilities and services is not possible here, but the following excerpt from a report prepared by the Cohasset Planning Board gives an idea as to some of the straits the towns are in:(1)

"Physical Condition of the Town - In spite of the fact that the cost of maintaining our community is exceedingly high, and in spite of our soaring debt and tax rate, our physical facilities are inadequate in many instances. The annual curtailment of water use indicates an insufficient supply. Our highways and sidewalks are in need of major repair. Surface drainage is poor and in places dangerous. The work of our Police Department is seriously hampered by cramped quarters. Our fire stations are barely able to house the expensive equipment we own. The location of most of our town offices on the second floor of the Town Hall, reached by a narrow and steep stairway, is a serious handicap, particularly to the elderly. The need for an adequate municipal garage has long been felt by thinking citizens. Our present debt and steadily increasing tax rate, still needs to be enlarged to meet the demands of a growing population. Our harbor, one of our greatest natural assets, is overcrowded. There is insufficient parking area in the business center. The Town owns six assembly halls, no one of which is wholly suitable for a Town Meeting. We maintain an open Town Dump where tons of garbage are dumped weekly, harboring thousands of rats and menacing the health of the community. We have a nuisance brook which causes disagreeable flooding periodically and portions of which are polluted."

(1) Paragraph from "A Ten Year Program for Cohasset" which is a preliminary study prepared by the Cohasset Planning Board, February 1957.

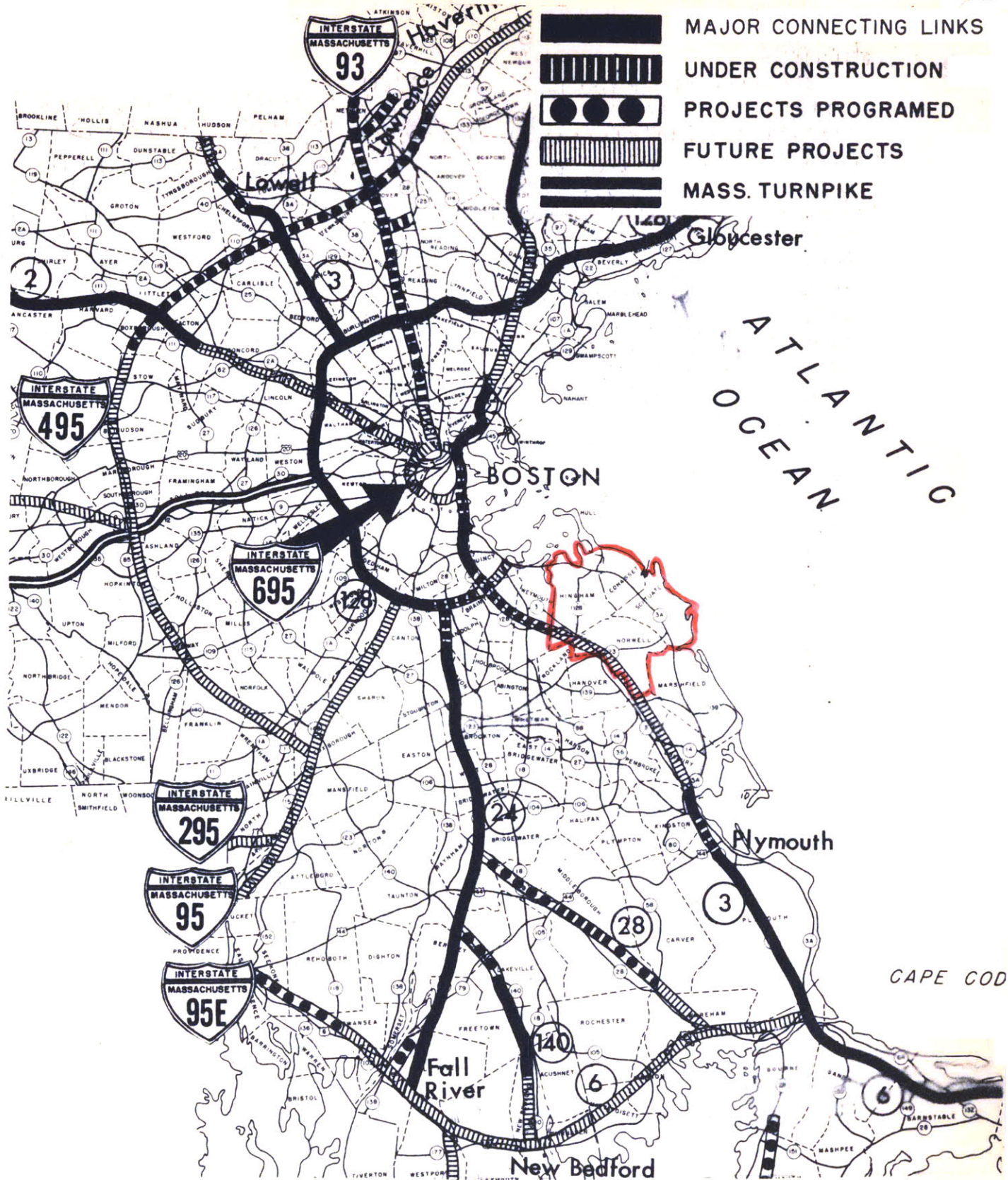
In summary, the Four Towns community facilities and services, for the most part are deficient. The possibilities of doing much on their own are limited and the pressures for additional services continue. Most of the services covered here are those required under present development. There will be new services and more complicated administration as the population increases. There will also be major alterations as new techniques make present methods obsolete.

CHAPTER 11.- CIRCULATION AND TRANSPORTATION

Streets and Highways

Most of the local through streets and many local minor streets were laid out before the day of the automobile. However, the present system in most cases can accommodate the vehicles moving over them most of the year. During the summer months volumes increase exceedingly, with vacationists and tourists heading for summer homes, the beaches and harbors. Automobiles thread along the waterfront along narrow streets in residential areas to get a glimpse of the ocean or to admire some of the fine old homes which dot the coast. Cars destined for the public beach at Nantasket wind across the towns in increasing numbers each year. Consequently, while most of the street system serves adequately as commuter routes and residential access roads during most of the year an added function as recreation access routes during the summer decreases their efficiency.

The map (separate) shows the major route system in the Area and the average traffic volumes for 1957. The inset shows figures from traffic counts taken at the intersection of Rte. 128 and Rte. 3 on a Sunday in July, 1958, and shows the increased volumes during this peak period.



RELATION OF FOUR TOWNS TO THE MAJOR HIGHWAY SYSTEM

Map from: A Report to Governor Foster Furcolo. Prepared by the Mass. Dept. of Public Works. Sept. 1958.

State Route 3 and the Southeast Expressway - State Route 3 will be largely replaced by the new Southeast Expressway connecting Boston and the Central Artery with the South Shore towns and Cape Cod. However, Rte.3 will remain a heavily-travelled road better able to serve more local traffic. The Expressway will be completed to Hingham by Fall of 1959, if work progresses according to schedule, where it will connect with Rte. 3. Work is getting underway to close the 15-mile gap between this point in Hingham and Duxbury. This vital roadway will spur the economic development through a broad area of influence, particularly around the interchanges.

The completion of the Expressway to Hingham will mean a greater number of commuters, who now prefer to travel by way of Rte. 3-A, will avoid this congested route by heading for the Expressway interchange.

State Route 3-A - This route is a by-pass of Rte. 3 and provides access to the coastal communities. This route is a four-lane highway from the Hingham-Weymouth line to the rotary at Hingham Harbor. At this point, some of the traffic heading for Hull and Cohasset leaves the route and it narrows to a three-lane highway until it reaches the Scituate-Cohasset line. From this point southward to the point where it rejoins Rte. 3 just north of Plymouth it is

a two-lane road.

State Route 123 - This route is a narrow, winding two-land road, passing through Norwell center and connecting Rte. 3 and Rte. 3-A. There will possibly be an interchange at the point where this route intersects the extension of the Southeast Expressway. At this time, the road will probably be inadequate to serve Norwell and Scituate commuters heading for the Southeast Expressway, as well as weekend traffic heading for Scituate Harbor.

State Route 128 - The greater portion of this route within the Four-Town Area is also Main Street in Hingham. This route carries large volumes of beach-bound traffic heading for Nantasket during the summer months. Proposals by the State for widening this route so that it could carry more traffic have been opposed by the Hinghamites who do not want to see the residential character of their most attractive street destroyed. This street contains some of Hingham's most beautiful old homes and structures of historic interest.

As a route to Nantasket it is devious and crosses Rte. 3-A at a bad intersection. There have been many proposals for relocation of this route. The route has also been designated as a part of the basic tourist route system by the Massachusetts Department of Commerce.

Transportation

The commuter transportation from Boston to the South Shore towns is at a critical stage. Commuter trains to this area were discontinued because the system was operating at a loss and the State refused further subsidy to the railroad. This area relied heavily on train service and dire consequences were predicted if the form of transportation were discontinued. Emergency bus service and the coincidental opening of the Southeast Expressway into the area diminished the affects of service abandonment somewhat. But a solution to the transportation problem is still being sought.

There have been several proposals made for commuter service. The townspeople apparently favor municipally owned bus service, or continued subsidy of the railroad line. Converting the rail lines to rapid transit lines as far as Hingham and connecting with the existing MTA system is proposal favored by transportation experts studying the situation. This proposal is the one most frequently put before the people and each time the proposal has gone down in crashing defeat. However, these efforts were made before the railroad stopped passenger service to the area and before fringe communities to the west of Boston gave a practical demonstration of how successful this form

of mass transit could be. As a result of these two factors, sponsors of rapid transit proposals claim the South Shore towns are taking a new look at their recommendations.

There is some bus service into the area. A line from Plymouth to Boston makes occasional stops in all of the towns. There are no commercial airports close by, the nearest air service being Logan Airport in Boston.

CHAPTER 12 - MAJOR RECREATION AND PUBLIC OPEN SPACEGeneral

Low density of residential development, the scenic coast, beaches, and harbors and the general openness are the Towns' leading assets. The problem has been to find ways of preserving and maintaining some of these assets for future enjoyment while developing others for use by those outside the Area in a way that will not destroy the overall character.

Within the Towns there is a wide difference in attitude regarding the development of recreation resources and the obligations the Towns have in making these assets available to a metropolitan population. While one town prepares an ambitious harbor development program to serve the needs of boating enthusiasts from surrounding areas, another town is cautious about accepting State funds for harbor improvements for fear that acceptance might result in surrender of some of the town's exclusive rights to this facility.

Opposition to future recreation development is justified in some cases as the townspeople encounter an increasing overcrowding of available facilities and congestion on local streets. Any new areas that might be opened up without

an over-all plan to improve accessibility to them will merely increase the congestion and inconveniences imposed on the localities. But all opposition can not be excused on these grounds; often objections to proposals are based on parochialism and an indifference to the needs of the neighboring urbanites.

Harbors

One of the major attractions to the area are the natural harbors in Hingham, Cohasset and Scituate. All three of these harbors have limited facilities and are overcrowded during much of the summer. Operated on their present scale the towns are barely able to manage such maintenance costs as dredging, due to constant shoaling, and pollution control. Both local and State funds are used for maintenance, but expenditures usually exceed returns.

Plans for future development of Hingham Harbor are underway. This is the largest of the three harbors and any extensive development would be costly. Cohasset is beginning plans for harbor improvement, but enlargement is complicated by the fact that its southerly side is largely in the town of Scituate and ledge rock prevents extension in most other parts. The most satisfactory development of the harbor depends on inter-town cooperation. Scituate is by far the most advanced in its plans and these will be con-

sidered in some detail.

A Harbor Development Plan for Scituate was completed in 1957 by a local committee. This plan provided for major enlargement of the harbor and channels. Berthing space for yachts and other small boats is planned in a well-organized marina. Space has been provided for private yacht and boat clubs. A small boat basin is proposed in an existing marshland, and the remainder of the marshland will be filled in with material from the dredging operations, changing this unattractive and unproductive area into a major recreation facility with swimming pool, playfields, park and grandstand for aquatic exhibitions. The plan for the harbor is well integrated with a plan for expansion of the existing business center and a second business area, specializing in marine activities, is proposed on some of the filled-in land. A wide esplanade and large areas for additional parking are also in the plan. Lastly, a limited-access parkway, planned to connect the harbor facilities and Rte. 3-A, will do much to improve the over-all circulation and insure the harbor's future success. The Harbor Development Committee would like to see a westerly extension of this parkway across Norwell, connecting with the Southeast Expressway.

Another harbor, Briggs Harbor in the northern part of

Scituate and adjoining Cohasset Harbor, has been recommended as a facility which would be improved and enlarged to supplement the accommodations at Scituate Harbor.

Beaches

Considering the miles of coast line included in these towns, the number of public beaches is practically negligible. There are two municipally controlled beaches in Cohasset, and one in Hingham. Scituate has three developed and three undeveloped beaches in municipal ownership. All of these beaches are small and are restricted to use by the townspeople and summer residents. Parking facilities for the most part are inadequate.

Nantasket Beach lies just across the line in Hull and, although outside the Four-Town Area, present and proposed usage has a very important affect on the circulation plans for the Area. It is accessible only by passing through Hingham or Cohasset.

This beach is operated by the M.D.C. and is surpassed in size and usage only by Revere Beach. The following table gives the statistics on usage in 1955:(1)

(1) Development Program: Parks, Reservations, Recreational Facilities. Edwards, Kelcey & Beck, consultants for the Commonwealth of Mass. M.D.C. Parks Division, Boston 1956.

<u>Weekday Daily Average</u>	<u>Holiday Peak Daily Average</u>	<u>Total Seasonal Estimate</u>
20,000	175,000	3,510,000

A proposed improvement program of Nantasket at an estimated cost of \$6,200,000 over a number of years is the largest salt-water beach development program contemplated by the M.D.C. This program would include such features as provision of more parking, land acquisition, more public comforts, and night lighting as well as participation in urban redevelopment clearance of land adjacent to the beach. The M.D.C. is also considering taking the 2½ miles of privately owned beach frontage to the north for public purposes.

Major shell-fishing areas are located along the North River and provisions for this activity are included in proposals for natural reservations, covered further along in this chapter. The North River also has areas which could be used for boating and swimming.

There are possibilities for developing small lakes and ponds in the Area for fishing and swimming. Most fresh water areas are small and their most effective use would be derived if included in a larger recreation unit, such as a park, camping ground or natural reservation.

Parks, Natural Reservations and Scenic Drives

The first two of these recreational facilities are

characterized by areas of considerable size left essentially in a natural state. The purpose often is to protect watershed areas or significant scenery and to provide for the protection of wildlife which otherwise might disappear from the area. The recreation values of this type of facility are larged and varied. They provide opportunity for nature study, hiking, boating, swimming, fishing, picnicking, camping, and for the hunting of surplus game.

The Four-Town Area is fortunate in having an abundance of land which has potential for this facility. The only existing facility of this type is Whitney Woods, several hundred acres of land under the supervision of the Trustees of Public Reservations. The principle feature is a picnic grove and some hiking trails through the area. Stips of land in private ownership affect the contiguity of this tract and impose a threat of future development changing the recreational character. An opportunity is now available to buy up this land, which is presently undeveloped, so as to include the Lily Pond, an attractive body of water with approximately three-fourths of its shore surrounded by woods. The Cohasset Water Department owns three narrow strips of land in the vicinity which could be included as a part of the open space, although not developed for recreation.

Proposed Strawberry Point State Park:- The Massachusetts Department of Natural Resources has recommended that 175 acres of land with ocean frontage in the northern part of Scituate be acquired for a state park.(1) This is a rocky coastal area with high scenic value and its primary use would be sight-seeing and picnicking. The Scituate Report is in agreement with this proposal, but recommends the State also acquire land for an access parkway to the park along Bassings Beach and Briggs Harbor, instead of increasing the volumes of traffic on the local streets.(2) This proposal would result in a continuous development of recreation land composed of the parkway, State park, the beach and harbor and tying in with the Cohasset Harbor and with Hatherly Country Club in Scituate.

Proposed North River Reservation:-(2) The proposal in the Scituate Report is for the town to acquire 750 acres of predominantly marshland along the North River to be left in a natural state for such activities as duck hunting, shell fishing and bass fishing, as well as developing some portion for

(1) Inventory and Plan for Development of Natural Resources of Massachusetts. Part II. Boston, 1957.

(2) From the Recreation Plan prepared by Shurcliff and Merrill as a part of the General Plan for Scituate prepared by Allen Benjamin, Planning Consultant, 1958.

launching of small boats.

Along the northern edge of this reservation there is a proposal for developing an existing road, the Driftway, as a parkway with provisions for picnicking and scenic vistas along it. The reservation abuts the Scituate County Club and this parkway would continue by the club and northward to Scituate Harbor where it would connect with the proposed harbor parkway previously mentioned.

This North River Reservation is consistent with proposals in the Norwell Plan to reserve areas along this river of a similar character. (1)

Proposed Clapp Road Reservation:- It has been recommended in the Scituate Report previously cited that a public agency acquire this 440 acres of lowland hardwood forest and marsh located in the western part of Scituate. This tract would be left in a natural state for wildlife study and a habitat for birds and animals. Currently rabbit, pheasant and quail hunting is available, and the area is used for the release of game bird during season. This reservation is contiguous with an area across the line in Norwell which has been proposed as a State park.

(1) A Preliminary General Plan for Norwell-1957. Prepared for the Norwell Planning Board by Adams, Howard, and Greeley, Planning Consultants, 1958.

Proposed State Park at Bound Brook Pond:- The Norwell Report in its General Plan includes the State Park that has been proposed by State interests and this Report urges that this area be kept as a natural reserve.

Jacobs Pond Reservation:- The Norwell Report recommends a wildlife preserve on the east shore of Jacobs Pond.

Planters Hill and Worlds End

As in other parts of this report, the coverage of Hingham recreation proposals suffer due to lack of a completed general plan. However, from field observation there is an area which is especially valuable for the type use being considered here. A promontory known as Planters Hill and Worlds End is presently available to the public on a limited basis. These two hills were formerly a private estate, informally landscaped and consisting of several hundred acres offering an excellent view of Hingham Harbor, the town and the ocean. At times, ~~this~~ property is open to the public for sightseeing but it is still in private ownership. Parking space outside the gate can accommodate a half dozen cars and access to the site is poor. This area should be purchased and reserved for the public on a permanent basis.

Town Parks:- Large areas for scenic town parks are not common. Wheelwright Park in Cohasset is the exception, being

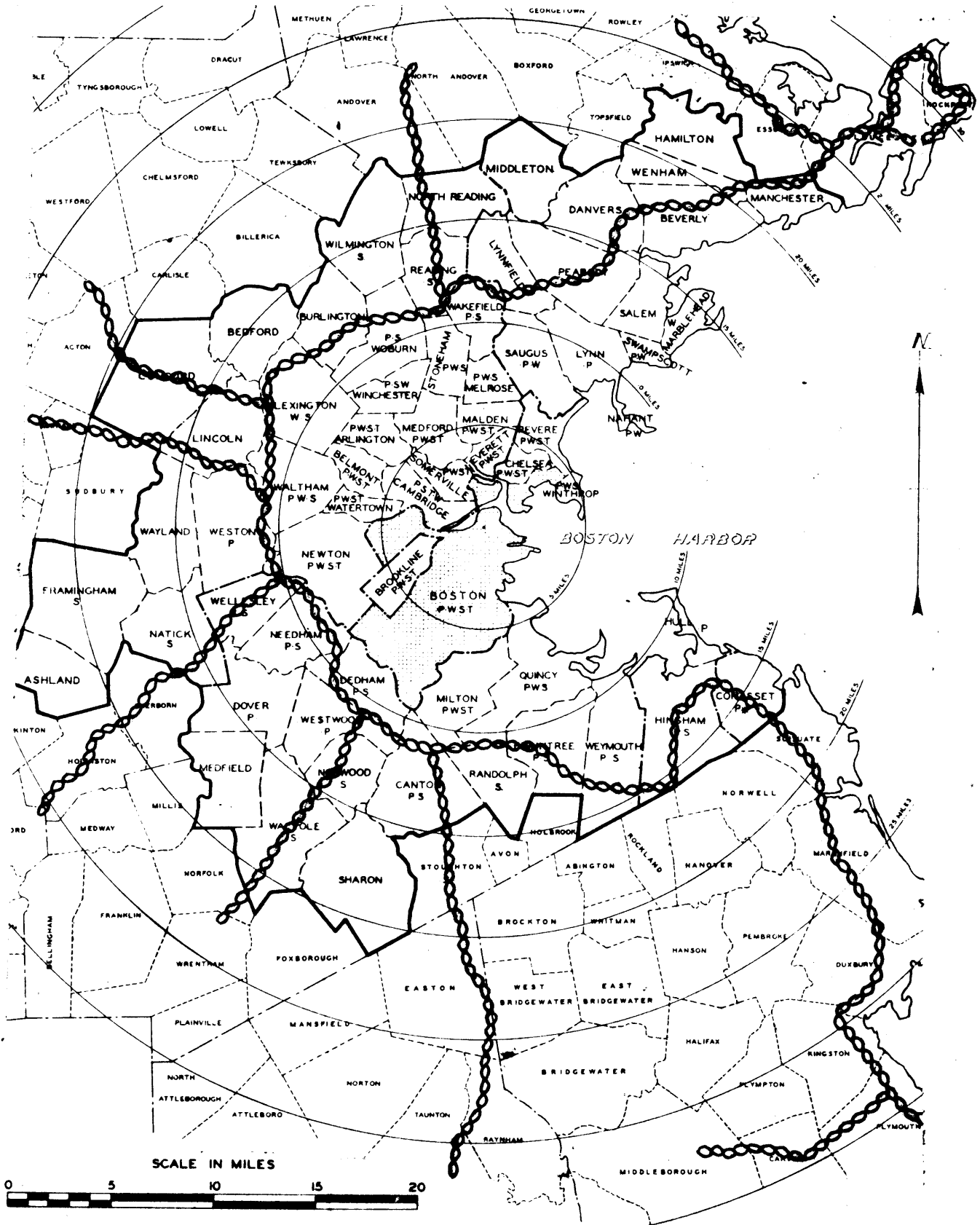
a large area commonly used for horseback riding by the townspeople.

The recommendation in the Scituate Report is that the town purchase for a park 130 acres along the west side of Cushing Highway, including Tack Factory Pond. This will tie together three tracts of water department land and give a proper setting to the town governmental center being built, by providing a large belt of open land along the Highway.

Tourist Routes

In 1955 the Massachusetts Department of Commerce prepared a report making recommendations for a system of tourist routes throughout the State at the request of the General Court. (1) The instructions were to pick out little-used routes with scenic value and that connect with major arterials, provide small roadside picnic areas, turnouts, lookouts, and vistas with special consideration given to overnight and eating accommodations. An important part of this resolution was that the State Department of Public Works may expend such sums as may be appropriated for construction and maintenance of non-State highway portions of the system.

(1) Study Concerning Tourist Route System for Mass. prepared by the Dept. of Commerce. Boston. Jan. 1957



BASIC TOURIST ROUTE SYSTEM
 Proposed by
MASS. DEPT OF COMMERCE

Source: Study Concerning Tourist Route System for
Mass. by Mass. Dept. of Commerce. Jan. 1957

In addition to providing routes of scenic value, direct access to points of interest and separation of fast and slow moving traffic were important functions of the system. Special attention was given to connecting ocean beaches and improving access to these beaches.

State Route 128 through Hingham was designated as a part of this tourist route system up to its junction with Rte. 3-A. This latter route becomes a part of the system at this point and continues through Cohasset and Scituate south. See map on page 91.

Golf Courses

The golf courses in the Area are all private clubs. There are two in Scituate, one in Cohasset and one in Hingham. It is difficult for towns to maintain public golf courses and many private clubs find it necessary to yield to pressures of increased property taxes and the lure of rising land values. One golf course in Hingham has been sold for residential development and the owners of the second club have attempted to meet financial pressures by commercializing. Proposals for a skating rink at this golf club were denied by the town officials on the basis that this club was gradually becoming an amusement park instead of a private golf club.

To meet increasing demands of golfing enthusiasts, public

agencies such as the M.D.C. must provide facilities.

The M.D.C. maintains two golf courses in the metropolitan area and is considering developing several more, none of which are within easy commuting distance for the people in the Four-Town Area.

Commercial Recreation

The Four-Town Area has particular potential for commercial recreation. This type enterprise could do a great deal to increase the tax base of the communities and yet be in character with the Area. There are several restaurants in the Area which are well known throughout Metropolitan Boston for their food and their proper setting for sea food specialties. Another feature is the South Shore Cohasset Playhouse, famous among summer stock theaters and drawing patronage from a wide area. There is one commercial amusement park in Scituate of the type that is educational and attractive to children.

CHAPTER 13 - MUNICIPAL FINANCE AND PUBLIC ADMINISTRATIONIncome

The real property tax is the only substantial source of revenue available to the individual towns. In Massachusetts towns support governmental activity to a much larger degree than is customary for other municipalities in the U.S. As a result, this has caused a much higher tax burden to be placed on real property than is found elsewhere in the nation.(1) The towns are relying more and more on grants-in-aid and shared taxes from the higher levels of government.

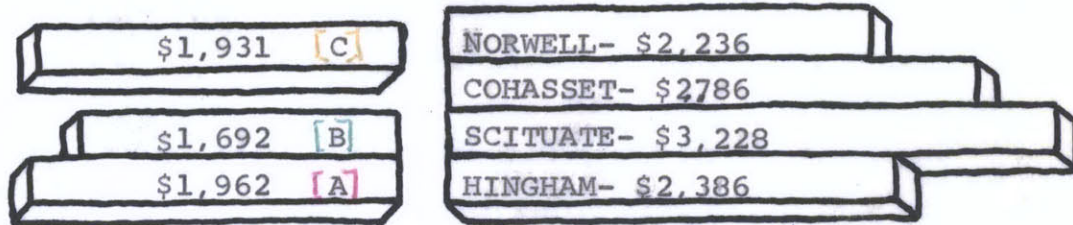
The valuation of real estate is determined by the assessors in each of the towns. In theory, it is a responsibility to be undertaken anew each year. Usually there is only a slight up-dating of the previous year's list of properties. There is, as yet, little use of new techniques of systematic property appraisal in the Four Towns, which results in inadequacies placing too much of tax burden on small and medium sized family residences, the largest group

(1) Local-State-Federal Fiscal Relations in Massachusetts by Walter F. Greaney. Bureau of Governmental Research. Univ. of Mass., Amherst. 1957

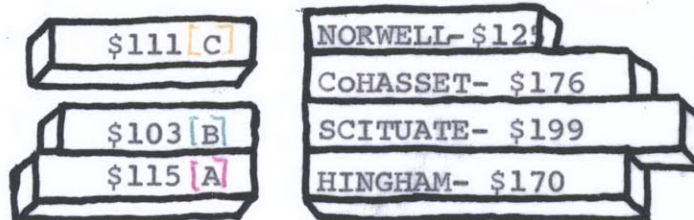
COMPARATIVE ANALYSIS OF FOUR-TOWN FINANCES

Source: Mass. Dept. of Commerce, Division of Planning & Research

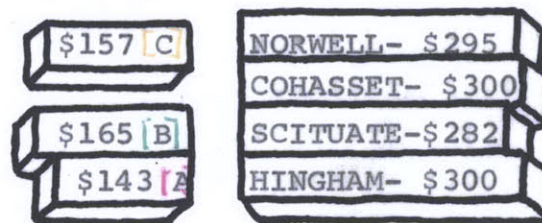
ASSESSED VALUATION PER CAPITA (1957)*



TAX LEVY PER CAPITA (1957)*



MUNICIPAL DEBT PER CAPITA (1957)*



*Per capita figures are based on the 1955 State Census of Population

[A] - Average of 58 municipalities with populations of 10,000-25,000.

[B] - Average of 59 municipalities with populations of 5,000-10,000.

[C] - Average of 73 municipalities with populations of 2,500-5,000.

of real property owners.(1)

The graphs on page 95 show the towns' financial picture as compared to averages for towns of a similar size in the state. The towns have an assessed valuation per capita considerably higher than the average. But they also have very high tax levy per capita. The unusually high assessed valuation per capita for Scituate is due mainly to the large number of summer residences in the town.

The tax rates for the towns in 1957 were as follows:-
Hingham - \$71.00; Scituate - \$61.60; Cohasset - \$63.00;
Norwell - \$56.00.

Disbursement and Bonded Debt

The normal expenses of operation in these towns are for the provision of such services as police and fire protection, health and sanitation inspection and enforcement, construction and maintenance of streets, education, provision of public utilities, and general government. In addition to these usual services the Four-Town Area also has found it necessary to spend public funds for parking facilities and harbor and shore front improvements.

(1) This inadequacy in local assessment practices was only recently brought out when Hingham employed experts in the field to reassess the town. The result was a substantial decrease in the tax-rate and a more equal distribution of tax burdens, due partly to a reappraisal of the many large, old residences in the town.

Although it is considered good municipal management to finance obligations from year to year on a pay-as-you-go basis, the Four-Towns, like most municipalities have found it necessary to borrow in order to provide services when needed. The amount of indebtedness a town can assume is limited by the state to 5% of the average assessed valuation of the towns for a three-year period. With the approval of the state, a town may go beyond this limit, but not greater than 10% of this average assessed value. The State Director of Corporation and Taxation reported that some towns are allowed to go as high as 15% and 20%, depending on local conditions and the amount of state aid they are receiving.(1) In light of this information the following table shows the net debt of the Four Towns as a ratio of their assessed valuation in 1957:

Net Debt as Percentage of Assessed Valuation. (1957)

Hingham.....	12.6%
Scituate.....	8.7%
Cohasset.....	8.3%
Norwell.....	8.7%

(1) In a report by the Bureau of Business Research at Boston University, municipal indebtedness was evaluated in the following terms: "In municipal finance, indebtedness exceeding 15% of assessed valuation is regarded as very high, with 20% used as a sort of 'peril point' maximum". See Capital Outlay Budget. 1959-1964 - Town of Canton. pg. 4 Jan. 1959

Administration

A few variations are to be found both with respect to organization and efficiency, but the general characteristics of the Four Towns' governments are quite similar. Each of the Four Towns has an open town meeting and a governing body of a Board of Selectmen. The towns serve as areas for local law enforcement and administration of petty justice, for assessment and collection of property taxes, administration of roads, public health and schools, and to provide services such as fire protection and water supply.

The principal features of their governments is the annual town meeting, where most of the important questions of public policy are presumably resolved. Originally the town meeting represented one of the best examples of pure democracy, but the increasing complexities of governmental problems, increasing populations and the lack of roots of many of the new-comers, result in inefficiencies and ineffectiveness in the towns' administration and policy making.

A great many of the towns' most important functions are carried out by elected, unpaid, part-time boards and committees operating without professional or skilled assistance. The assessment practices, as previously mentioned, are one example. Increased responsibilities placed upon town government in recent years have led to a more integrated type of

administrative structure with the adoption of the town-manager plan in many Massachusetts towns. None of the Four Towns have, and most are too small to afford, a town manager. In Cohasset one of the members on the Board of Selectmen is employed full-time to serve somewhat unofficially in this capacity.

CHAPTER 14 - PLANNING FUNCTION

Going beyond the necessary services previously discussed, there is and has been a need for policy-making decisions in matters relating to planning. This planning function should be a service to and of the people that does more than regulate and control, as has been the more common approach in these communities in the past.

Each of the towns has a planning board, but none have a permanent professional staff. Hingham was the first to establish a planning board in 1923 and its powers and duties were expanded in 1942 under state enabling legislation changes. The first zoning by-law was adopted in 1941, and most recent amendment to this by-law was in 1959. Cohasset established their planning board in 1938 although it didn't adopt a zoning by-law until 1955. Scituate established a planning board in 1929 which was reestablished in 1956. The town adopted its first zoning in 1936. Norwell established its planning board in 1953 but had adopted zoning laws in 1951.

The boards' time is mainly devoted to details of zoning and subdivision control. Recently each of the Four Towns has taken advantage of federal assistance to have planning studies made under Section 701 of Title VII of the Housing Act of 1954. These studies for general plans or portions

thereof have either been completed or are in the process of completion now.

Scituate's study under this program was completed in November 1958. This study did not contain all the elements of a General Plan but was intended to fill in portions of studies which had been previously prepared. This 701 study was a plan for schools, recreation and public open spaces, streets and sidewalk plan and a plan for development of Scituate Harbor business center. The portions of an over-all plan which had preceded it were a comprehensive zoning map revision, adopted in 1954, revision of the zoning regulation adopted in 1956 basic planning studies, published in 1956 and a Master Plan for Scituate Harbor prepared in 1957.

Norwell's report on a general plan under this program was completed in December 1958.(1) This report included survey and analysis, general plan proposals and a capital improvements program.

Hingham's 701 study is still in process and should be completed soon. The Cohasset study began in April 1959 and has not progressed much further than the gathering of basic data at this time. This study does not include all

(1) A Preliminary General Plan for Norwell-1975. Report prepared for the Norwell Planning Board by Adams, Howard and Greeley, Planning Consultants. December 1958.

the elements of the general plan, but the town hopes to expand the scope of the study if more funds are made available by the federal government under this program in the future.

There are disadvantages and advantages, naturally, to the 701 program. The greatest disadvantage is that the towns receive a package-plan for future development - the consultant preparing the plan, delivering on the due date and, more often than not, disappearing from the picture. The towns may or may not have funds to retain the services of the planning expert to help launch the plan and keep it in motion. Helpful as these 701 studies may be to the communities in the future, they offer no magic formula for solving new situations that are bound to come up and are not covered in the studies. If these studies serve no other purpose, at least they have made the towns more conscious of long-range planning objectives than they have been in the past, and perhaps they will refer to these studies occasionally instead of resolving all of their problems on an opportunistic basis.

PART III - THE NEW COMMUNITY

CHAPTER 15 - THE DESIGN FEATURES

On the basis of the background of problems and needs of the Four-Town Area and the metropolitan area, structured within the objectives and goals previously stated, and limited by what is feasibly possible, a proposed physical plan has been prepared. This is a General Development Plan for a new community making provisions for the following features:

A. Circulation Features:

- (1) a system of recreation-commuter routes around the periphery of the new community, connecting with the new Southeast Expressway, with the town centers, with the harbor areas and other major recreation areas, and providing access to the new community.
- (2) a system of local streets within the new community, adapted as much as possible to the natural topography for economies of construction, drainage and aesthetics. These are designed so as to insure smooth traffic movement between points of interest within the community while, at the same time, reducing volumes of fast-moving traffic within residential neighborhoods.

B. Community Features

- (1) residential areas providing space for single-family dwellings, duplexes, and garden apartments; arranged on lots of such size so as to insure adequate yard space and outdoor living areas, and to enable a flexibility of lot planning that would result in trees and rock retained as features of the residential landscape.
- (2) A system of elementary schools, one in each of three neighborhoods, within $\frac{1}{2}$ -mile radius of the greatest concentration of children in that neighborhood and, where possible, accessible by paths separated from vehicular traffic. These sites would also contain space for neighborhood parks to serve a local need for active and passive recreational activities.
- (3) a junior-senior high school and community center, surrounded with adequate land area for large-scale spectator sports, as well as for participation in athletic activities by all members of the community.
- (4) neighborhood shopping centers, providing facilities for convenience shopping within convenient walking distance from all residences in the denser areas and easily accessible by vehicle from less dense areas.

- (5) wooded community reserve areas, located along steep slopes and valleys, including much of the wet-land and areas that are not readily buildable. These areas are related to the developed areas so as to create an openness, separate sub-areas within neighborhoods, and to provide pedestrians' paths, riding and bicycle trails in a continuous pattern so as to enable almost a complete circuit within the community, crossing a minimum number of roads, and integrated with the major recreational facilities on the periphery of the community.

C. Area-wide Features

- (1) an integrated shopping area, providing retail outlets not only for the needs of the immediate area but also serving a trade area of nearby towns. One part of the site would be reserved for a planned commercial recreation area.
- (2) a civic center with administrative offices not only for administration of the new community, but also the center for area-wide administrative functions. This would also include a central library, distributing to the smaller existing libraries.
- (3) a community hospital, providing much needed medical facilities to the Area and serving some of the

surrounding towns to a limited extent. This would also serve as a nucleus for a medical center consisting of professional offices and service in the adjacent office park area.

- (4) an office park reserved for professional offices, businesses and related services, integrated in such a way as to enable clusters of related activities to center around a nucleus of some common service.
- (5) a central service area serving as the work-shop for the community and the Four Towns. Some light industrial uses would also be permitted in this area.
- (6) a community college, serving initially as a Junior College, but later expanded to serve a larger area with a four-year college program.

D. Regional Features

- (1) a belt of recreation land providing setting for routes leading to ocean-oriented activities and making use of the most attractive features in the landscape. This space would not only serve as a green belt between the communities but would consist of areas large enough so as to be in scale with the regional pattern, providing a contrast between this Area and the more built-up areas to the west of it.

- (2) an area reserved for institutional uses, requiring a large tract in a quiet secluded section of the metropolitan region. Preference should be given to hospitals providing facilities for patients in long confinement so that recreational amenities of the area could play a part in their rehabilitation.

CHAPTER 16 - CRITERIA FOR COMMUNITY DESIGN

With fundamentals of policy, objectives, and general development in mind, it is necessary at this stage to have some insight as to how many and what type of people is the community being planned for - what are their requirements apt to be in housing and community facilities.

From Where are the Future Residents Most Apt to Come?

1. From within the Four-Town Area:- Some would be people merely seeking larger accommodations or desiring a change but the majority would probably be one of the following two categories not able to find accommodations within the area:

- a. Couples over 50 years old, whose families have grown up and moved away, looking for rentals or smaller accommodations and wanting to be near shopping facilities and social and recreation activities planned for this group.
- b. Newlyweds, beginning their own households and seeking similar accommodations as the above group until their families get started and they are more firmly established in their occupations.

2. From outside the Four-Town Area:- These people would more than likely fall into the following categories:

- a. young couples in their early thirties moving out from the central city or the more densely populated suburbs, trying to find more space for a growing family. This group would be most representative of the new-comers to the Four Towns at present - white collar workers, commuters to Boston or other urban areas, middle income, high educational level and firmly established in their occupation. This move will probably be their last in the graduation up the scale of housing as their family and income increases, and they expect the ultimate in their dream-house, having profited by mistakes in previous homes.
- b. Staff and personnel employed at the new institutions - the medical institute and the college.
- (1) professional people - doctors, professors, instructors
- (2) skilled and semi-skilled - laboratory technicians, nurses, clerical workers
- c. Non-basic workers employed in community services such as store clerks, teachers, repairmen, doctors, dentists, etc.
- d. Employees at the new industries along the Southeast Expressway and at the proposed industrial park at

the Hingham Naval Depot. Most new industries would locate in this area because of an existing labor force within commuting distance. Therefore, the majority of the new comers would probably be engineers, executives, and supervisory staff recruited from outside the commuter range.

Future Changes in Age Structure

The Four Town age-composition pyramid for 1975 would undoubtedly show startling differences as compared to that shown for 1955 due to the nationwide changes in the age structure taking place. These changes will be reflected in demands on housing and community facilities during the development of the new community and a look at predictions made by the experts on a national scale will give some indication of what might be expected on the local levels.

The most dramatic changes in the nation's population since World War II has been the increase in number of children and their demands on elementary school facilities. Experts predict the most dramatic changes during 1955-1965 will be the increase of teen-age groups and the demands on high schools and higher education facilities. Ten years later, 1965-1975, these same persons will have reached the ages at which entry into the labor force and establishment

of households takes place and they will be replacing the relatively small number of persons who are the survivors of the depression-year births.(1) Other facts from this source were:

- (1) Recent high levels of birth will mean an increase in number of persons in their twenties by 1975; a gain of nearly 2/3 over their number in 1955 has been estimated.
- (2) Low birth rates during the depression years will mean a decline in persons between 35 and 44 years old.
- (3) For persons between 45 and 64 there will be a marked increase.
- (4) Senior citizens, 65 years old and over will increase by 45% in 1975 over their number in 1955.

Occupational Stability of the Population

Although the future population might represent a wide range of occupations and incomes, the occupational stability and reliability of the labor force should be substantially secure. Due to the fact that the community will be built in large sections over regulated periods, it is quite possible that some large lending institutions will purchase the first mortgages and purchase them in bulk. As a result screening of mortgagors will undoubtedly mean the institution

(1) Population Changes to 1975 by Conrad Tauber. Annals of the American Academy of Political and Social Sciences. Sept. 1957.

choosing those which offer the least risk. The bulk of their investment in one area would mean that they would be more careful than if the risk was spread over a wider area. Consequently, the new community should have a very responsible citizenry.

Density and Population Potential

The over-all density for this community is two families per acre of buildable residential land.(1) This is a very low density, as is proper for the type of community being planned here. The land is rough and rocky in many parts and will be costly to develop;but it is richly endowed in natural amenities and variety of landscape which make it ideal for the type of home site which will satisfy the desires of the anticipated future residents.

This density is also in character with the surrounding area and complies with the objectives of the zoning by-laws of the Four Towns. It is compatible with the recreation development planned for on the periphery and it is a density which gives flexibility in utility planning, so that health and convenience standards could be maintained without excessive costs.

(1) Buildable vacant land is all the land within the residential areas including elementary schools and streets, but excluding swamp and land with slopes greater than 10%.

There are approximately 1,445 acres of buildable land reserved for residential purposes. At this density the estimated potential population, assuming an average family size of 3.5 persons, would be 10,000 persons living in the new community.

Land Use Allocation

In determining where various uses would be located within the plan, the determining criteria were the circulation pattern, topography, staging and functional interrelationships with the community and within the Four-Town Area. By disregarding any attempt at assigning land uses to the areas within the individual towns, so that each would have a somewhat equal portion of those uses which are the most profitable in terms of cost-revenue ratios, implies a governmental and fiscal reorganization which is discussed later in this report. Distributing land uses as determined by fiscal expediency would only be slightly better than four plans drawn independently by the Four Towns. Whereas land use planning should give proper consideration to optimum cost-revenue relationships, in this particular case there was a need for caution to avoid distortion of the entire plan, where remedial action might more properly be obtained in the tax field.

CHAPTER 17 - RESIDENTIAL AREAS

The fundamental concept of planning in residential areas is to create neighborhood units, located so that no major street passes through the unit and providing space for enough residences to support an elementary school facility within $\frac{1}{2}$ mile radius of this facility if possible.(1)

One of the claimed attributes of this concept is that there is an intimacy and interdependency among the people derived from common use of facilities and the acquaintance of neighbor with neighbor. These neighborhoods are indentified as the area within artificial or natural boundaries of major arterials and circulatory routes, steep slopes, swamp and water bodies.

Basic Objectives of Design of Residential Areas

In addition to applying the fundamentals of the neighborhood concept where possible, there are other objectives to be worked for in this community. Most of these objectives are unique to the situation and are made possible by the freedom of planning a new community, by the natural

(1) The neighborhood unit concept is thoroughly covered in standard planning literature such as "Planning the Neighborhood" by the American Public Health Association and "The Neighborhood Unit Plan" by James Dahir. See bibliography.

amenities of the site, and primarily by the additional controls made possible by public ownership of the land and the use of covenants. These objectives are:

- (1) To attain an integration of groups of houses and the land, with an accent on preserving trees and the natural features of the landscape. Houses arranged around short loop streets, or grouped in clusters in the more sparsely developed areas, will be surrounded by most of the natural growth so that they appear to be carved out of the landscape. In addition to aesthetic advantages, these groupings and clusters offer an intimacy which is more conducive to neighborliness than is the larger neighborhood unit.
- (2) To provide for an integration of individual homes and land, enforcing restrictions to prevent developers from excessive grading and cutting of trees. This enables the prospective home owner to have a proper setting for his home but releases him from the burden of caring for large lawn areas and gardens, a burden often imposed on him by the developer and suburban conformity.
- (3) To separate vehicular and pedestrian traffic, using the open spaces of the community as passages from one area to another, inviting people to walk or cycle and

channelling them into recreation areas where they may participate in activities and use their increasing leisure time productively in healthful pursuits.

- (4) To prevent the stereotype patterns of row after row of similar house designs, all, conforming to minimum zone requirements of set-back and lot size. The land will be developed in large enough areas to allow group planning of residences and approval by an architectural control and a planning board.
- (5) To encourage better balanced neighborhoods with a reasonable variation of housing types and price ranges. This will help to stabilize values, prevent decline in certain sections, and create a more interesting neighborhood by change and contrast between building bulks and styles. In working toward this objective extreme caution is needed to avoid a hodge-podge as a result of too great a variance; transition should be the watchword with controls to prevent exclusiveness and monotony.

Community Neighborhoods

There are three distinct neighborhoods in this community, each providing area for residential development to house approximately 1,000 families or 3,000-3,500 persons. These neighborhoods are of various sizes as determined by the

circulation pattern, topography and community orientation.

The over-all neighborhood densities are as follows:

Neighborhood A:- Three families per acre of buildable residential land. This neighborhood is the closest to the center of gravity of the community; topography lends itself to this denser development, and its smaller area would mean it requires this density to support a school of a size considered most economical to build and administer.

Neighborhood B:- Two families per acre of buildable land. The physical characteristics and community relationship would mean this neighborhood would have the greatest variety of housing densities.

Neighborhood C:- One and one-half families per acre of buildable residential land. Large areas in this neighborhood would have to be developed at the lowest density due to slope, swamp and rock. The major portion of the neighborhood is the most remote from community activities and services.

While these densities apportion residences throughout the community by neighborhood, a more detailed analysis is needed to determine where within the neighborhoods more precise densities are possible as determined by topography, relationship to schools and to the community as a whole. The table on page 118 shows this density breakdown by neigh-

RESIDENTIAL DATA BY NEIGHBORHOODS

NEIGHBORHOODS	MULTI-FAMILY AREAS			SINGLE-FAMILY AREAS									TOTALS		
	Number of dwelling units	Acres	Average density per gross acre	HIGHEST			MEDIUM			LOWEST			Number of dwelling units	Acres	Average density per gross acre
				Number of dwelling units	Acres	Average density per gross acre	Number of dwelling units	Acres	Average Density per gross acre	Number of dwelling units	Acres	Average density per gross acre			
A	180	45	4	855	285	3							1035	330	3
B	100	25	4	225	75	3	640	320	2	100	100	1	1065	520	2
C	40	10	4	375	125	3	200	100	2	375	375	1	990	610	1.5
TOTALS	320	80	4	1445	485	3	840	420	2	475	475	1	3090	1460	2

borhood. These densities do not imply restrictions on development by setting a minimum lot size in the same way zoning districts do. To accomplish the objective of variation within the neighborhood, the density in the district means an over-all density as a goal with lot sizes above and below the average.

Multi-Family Groups

The multi-family areas as shown on the land use map are to provide units of the garden apartment and duplex type, their principle characteristic being openness and low coverage. The over-all density of four dwelling units per residential acre will hold throughout but a great deal of flexibility should be allowed to permit the builders to arrange a grouping economically with some of the land area collected into large undeveloped areas to preserve natural surroundings, and to avoid large lawn areas which would be costly to maintain.

Sites for the multi-family units are close to the secondary and major arteries of travel, providing needed access for greater traffic volumes generated. Location of this type housing between the single-family areas and the more intense community activities acts not only as a stable transition but places the occupants of these units in a location they usually prefer - in close proximity to the center of gravity of the community. They are also located farther from the

elementary school as it is not likely that there will be the same ratio of school children found in the single-family districts. However, a relatively high ratio of pre-school children may be expected and nearby tot-lot and possible location for nursery-kindergarten should be provided.

The multi-family units have also been located mostly on sloping terrain. The flexibility of this type housing on slopes permits variance of floor levels between units in order to meet differences in site elevations and enabling an outside entrance from ground level for the second-story units. This feature approaches advantages of single-family units by enabling outdoor living areas to be accessible from practically all of the units. It also permits a pleasant integration of garage and dwellings; building costs are cut by avoiding excess grading and deep foundations while a great deal of interest and variety can be introduced into groupings of these units and changing roof lines. The result of this judicious planning will mean that these multi-family units will be compatible with the suburban setting of the community.

CHAPTER 18 - EDUCATIONAL FACILITIESGeneral

The system of schools as recommended here is a 6-3-3 system, with three K-6 units to serve the three neighborhoods and a central junior-senior high school located on the same site but in separate buildings. A separate nursery-kindergarten school is also recommended central to the multi-family units. In addition, a junior college to serve the Four-Town Area is discussed in a separate section of this report. This system of schools would provide a full complement for the educational needs of the community, including adult education.

Estimates have been made on ultimate school enrollment at all grade-levels, based on averages and assuming all the children within a certain age group would attend public school facilities. The resulting estimates are a high which allow for a safety factor, but the assumption that all will attend public schools is not apt to be the case. This is especially true if private and parochial schools have the same attraction to the people moving into the new community as these schools have had in the Four-Town Area. Future schools of this type would aid the community in keeping up with demands on educational facilities and sites

have been reserved in the community for private and parochial schools, which may want to locate there.

Elementary Schools

One elementary school is located in each of the three neighborhoods. In each case, the school is so located as to be central to the maximum potential elementary school child population. Each of the schools can be reached by pedestrian pathways from most parts of the community, and they are located so to be easily accessible by vehicle from those more remote parts.

Each of the elementary school plants is planned as an 18-room unit plus a kindergarten to serve an estimated number of 450-600 children. This estimate is based on an average of 0.45 to 0.6 elementary school children per dwelling unit.(1) This would mean an average of 25-32 pupils per class. Judged by state standards this would be a desirable and efficient school plant.

(1) The average of elementary school children per D.U. in the Four-Town Area was 0.45 in 1955. A detailed study made in Scituate showed an estimate of 0.54 in 1965 based on percentage of survival and population projection techniques. A study in Wayland of new subdivisions showed 0.6 elementary school children for each new D.U.

Department of Education Recommendations*

Capacities for most efficient use of school plant

<u>Minimum</u>	<u>Maximum</u>	<u>Optimum</u>
180 pupils	600 pupils	360 pupils

Recommended No. of pupils per class

<u>Minimum</u>	<u>Maximum</u>	<u>Optimum</u>
20	35	25

Size of Site:- The size of the site was determined by using State standard recommendations of 5 acres minimum plus one acre for each additional 100 pupils. This would mean a minimum school site of 9½ to 11 acres. This site in addition to serving as a location for school building and play space for elementary age group would also serve as the neighborhood playground providing space for activities to serve other age groups including adults. Because of the low density and general openness of the community this school site would serve as the only formally developed playground within the neighborhoods, except for Neighborhood A. A site of 12 acres maximum would serve these school and recreational needs.

Junior-Senior High School

Secondary school facilities will be provided for on one site, although in separate buildings for junior high school

* See Massachusetts' Public School Facilities Survey.
Department of Education, Commonwealth of Mass. Boston. 1954.

group and the senior high school group. As previously mentioned in another section of this report, demands on secondary school facilities are expected to increase at a very rapid rate during the ensuing years. To use averages of number of secondary school pupils per dwelling unit for 1955 or previous years would be misleading. For purposes of estimation, data from a detailed study of Scituate schools is used here.(1) Analysing available data and population predictions for the town, a capsulization of ratio of secondary school students to D.U.s based on percentage of survival techniques in this study showed the following estimates:

	<u>1956</u>	<u>1965</u>	<u>1980</u>
No. of D.U.	2600	3700	5150
No. of Students	687	1500	2000
Ratio of Students to D.U.	0.26	0.41	0.39

The average number of secondary school students in 1955 in the Four-Town Area was 0.29 per dwelling unit, which is fairly consistent with the figure for Scituate. Assuming a growth pattern and change in age structure within the new community from 1965-1975 comparable to that in Scituate from 1955-1980 the ultimate capacity for the high school in 1975

(1) The School System Report prepared by the Educational Service Associates, Medford, Mass., as a part of the Scituate General Plan prepared by Allen Benjamin, Planning Consultant, 1958.

would be 1,450 students. By Massachusetts standards, this would fall in the middle for the range of 1,000 to 2,200 students considered as satisfactory enrollment for most efficient use of secondary education school plant.

Size of the Site:- The State recommends the following for determining junior high school and senior high school sites:

Junior High - 10 acres plus 1 acre per 100 pupils
Senior High - 15 acres plus 1 acre per 100 pupils

Using the senior high school formula as the most desirable for combined needs, the recommended site would be 29½ acres. This should provide adequate space for buildings, parking, access drives, landscaping and recreational activities in the school program. The site as shown on the General Development Plan is 30 acres, plus an additional 20 acres for other community recreational and spectator activities, and a town park integrated into the design.

CHAPTER 19 - COMMUNITY COLLEGEBackground on Higher Educational Needs

For some time Massachusetts has been studying the needs for college facilities to meet an existing shortage and to provide for a rapidly increasing demand. Estimates are that one out of every three qualified high school graduates will not find a place in Massachusetts college by 1965. (1) Massachusetts has always relied heavily on private institutions to provide facilities, but these institutions will take fewer State residents as the national college shortage increases. Most towns are too small and too limited in their fiscal resources to do much about the shortage. The State has no agency or authority entrusted with the initiation and planning of a system of colleges to meet the needs.

(1) From a report of the Special Commission on Audit of State Needs, March 1958: House Bill #3036. Needs in Massachusetts' Higher Education with Special Reference to Community Colleges. This report also brings out other vital statistics: State ranks 48th in the U.S. in per capita support of higher education although it ranks 9th in per capita income; if all schools of higher education were to expand to limits they now anticipate there would still be a minimum shortage within the next 10 years of places for at least 39,000 qualified applicants; the State educates only one-third of the additional teachers needed each year and needs 10% more nurses as well as additional engineers and other professional personnel.

In another report by the Governor, the point was stressed that no section of the State has been more heavily penalized by a lack of higher educational facilities than has Southeastern Massachusetts.(1) In this report a recommendation is made that a technical college and two community colleges be built in this area as a part of a State-wide system, construction to begin by 1961.

Advantages of an Annex Location for a Community College

Problems of higher education are of such a magnitude as to require a great deal of State activity, support, and coordination; but this does not excuse towns from attempting to assume some of the responsibility. A college, initially proposed by and planned for by the townspeople, would do more toward creating a community spirit and a cultural center for community activity than would be the case if the State had to assume complete responsibility.

Statistics show the Four Towns have a population which needs and would support a college as a community project. There was an average of 68% of high school graduating students planning on higher education in 1957 as compared to an average of 41% for the State.(2)

(1) The Responsibility of the Commonwealth in Higher Education. A special message to the Massachusetts Legislature by Governor Foster Furcolo. July 1958. Boston.

(2) op. cit. Special Commission on Audit of State Needs.

Relative to this is the high level of education of the townspeople as previously brought out in another section. Public support plus the following advantages are strong determinants for a college proposal:

- (1) good accessibility from the region it would serve
- (2) availability of the land
- (3) natural amenities, both of the site and the surrounding area, which mean a pleasant setting and environment that would give the college a character and prestige it might not have if located in a more built-up area.
- (4) recreational facilities in the surrounding area could supplement the facilities provided on campus for a well-rounded physical education and recreation program
- (5) the community and college expanding together would mean a good integration and flexibility in planning, with many economies to be realized.

Development Plan for the Community College

It is recommended that the college begin as a junior college to serve the immediate area, as well as providing secondary educational facilities until the new community can support its own junior-senior high school. By 1975 the college will have expanded to provide a four-year college program and serve a wider area.

Service Area and Enrollment:- Within the time period of this study the college would serve an area within approximately a 10-mile radius of the Annex. An estimate by the State shows that there would be over 15,000 potential college students in

1965 within this 1-mile area.(1) Assuming that 25% of these were graduating high school students and that 50% of this number desired to go on to higher education, there would be approximately 1,800 students seeking entrance to a college, vocational or trade school by 1965 within the service area of the proposed college.

Therefore, if the proposed college were to have an entering class of 450-500 students it would be able to accomodate 25% of the student load in the area. Based on these statistics, the college as proposed here should be designed to serve approximately 1,500-2,000 students by 1975. In addition to this day-time enrollment, facilities would be provided for adult and special educational courses in the evening.

Size and Location:- The area reserved for college purposes is 250 acres. Initially the junior college would probably require only 35-40 acres. The developed area by 1975 would probably be only 100-150 acres. Unlike other parts of the community, which are expected to reach an ultimate development by 1975, the college must provide for expansion beyond this period. It is also possible to extend the

(1) op. cit. Potential students are the total number of persons between the ages 18 through 21 years old.

college outside the Annex by reserving the land adjacent to it around Triphammer Pond in the event that other studies reveal a need for an institution to serve a larger area than proposed here.

The college is located so as to be near the center of gravity of the community but still separated from the more intimate community activities. Traffic need not cut through the community to reach the campus. The college and high school are adjacent to permit a flexibility in development and useage of common facilities. Close proximity to the shopping area would mean student trade could support operations of book stores and stationers. Finally, the campus development serves as a "green area" between the new community and Hingham.

CHAPTER 20 - COMMERCIAL FACILITIES

Neighborhood Shopping Areas

Space is to be provided for two neighborhood shopping areas, each approximately 5 acres. These are located along circulatory routes so as to be easily accessible from within the neighborhood as well as attracting some trade from outside the community as a result of impulse buying. These centers would provide for the sale of convenience goods - the daily living needs in foods, drugs, sundries and personal services. A typical center would include a food market, drug store, barber shop and beauty parlor, a service station and a laundry and dry cleaning establishment.

Major Shopping Center

A new store center, such as the one proposed here, cannot create buying power but can only attract customers from existing store centers or secure part of the increase in purchasing power of the Area that will accrue from the increase in population. The boundaries of a trade center can only be determined by careful analysis, taking into account factors concerning competing centers and the buying habits of the public. Only rough approximations are possible here, allowing for adequate room for future expansion.

Shopping facilities and services provided at this center would serve the new community and the Four Towns, as well as drawing some trade from the surrounding towns within 15 and 20 minutes driving time. The center would have a good drawing power because of its accessibility, parking conveniences, and proximity to other Area functions. Its location along the recreation-commuter route would result in some impulse buying from trade outside the Area.

The center would probably have as its major tenant a variety store. In addition, it would include a supermarket, drug stores, appliance store, gift shop, stationers, book store and camera supplies, restaurant, sporting goods and hardware store, clothing stores, as well as numerous service establishments. It would supply most of the shopping needs of the Area with the exception of major purchases, or "demand goods", such as furniture, coats, suits, and major appliances. The regional shopping areas nearby would receive this type of trade.

Area for the Shopping Center:- Using a rough figure of 13.3 square feet of retail floor space per capita in terms of population increase within the trade area and allowing a 3:1 parking ratio, 50 acres of land would be needed

by 1975. (1) This is based on the assumption there will be an increase in population of 50,000 persons within the trading area - that is, 30,000 in the Four Towns, 10,000 in the new community and an additional 10,000 from other surrounding towns. This new center would probably only receive one-half of this increased purchasing power as a result of growth, and an acreage of 25 acres by 1975 would be reasonable.

Fifty-five acres of land have been reserved for commercial purposes. This provides space for the 25-acre shopping center with adequate space for expansion beyond 1975. In addition, it provides space for suitable commercial recreation development.

(1) This figure of 13.3 sq. ft. per capita is based on the following information from an article by Robert H. Armstrong in Urban Land Institute Bulletin Vol. 15. No. 9 Oct. 1956. As a rule of thumb for predicting retail space demand, \$1,200 per capita for all retail sales is allowed (no allowance for depreciation in the dollar); this figure is multiplied by expected population increase and figuring over-all sales will approximate \$90 per sq. ft. a rough estimate of floor space is established.



RETAIL TRADE CENTERS

	<u>TYPE</u>	<u>NO. OF STORES</u>
★	Primary	350-720
●	Major	100-350
■	Intermediate	40-100
▲	Minor	20-40
●	Local	6-20
★	Proposed South Shore Regional Shopping Center	
■	Proposed Four-Town Shopping Center	

Source: Boston Globe Map of Metropolitan Boston-1956

CHAPTER 21 - THE CENTER

Scale

The scale of the center is one of the most important factors in its design. This center is not merely an area where space is to be provided for public buildings and commercial establishments. To achieve its conceptual purpose, it must be symbolic of the cooperative efforts of the Towns and instill a feeling of centrality. It must be a more dominant feature in the Area-wide landscape than any of the existing Town Centers.

This can be most effectively achieved in this suburban atmosphere by grouping as many public and commercial functions as possible into a unified center. Pleasant massing of structures and site arrangements, along with proper use relationships, should aim for a dimension which immediately denotes this center as the focal point of joint activity. Adequate open space and strategic use of topography would feature these groupings. The final effect would be a center which contrasts sharply with the more scattered existing centers that lack unity and are characterized by mixed development and poor circulation.

Orientation

The center must be easily accessible to all parts of the

Area it is serving, but not necessarily equidistant from all four existing centers. It is located in accordance with the approximate center of gravity of the Area as determined by future traffic movements. Traffic would originate, naturally, from the east and move westward to the urban areas and central city. This movement would be funnelled by the street system to a focal point - the interchange leading onto the Southeast Expressway in southwest Hingham. Therefore, the three most easterly communities would be drawn toward the center as a result of their normal movement patterns; Hinghamites would have to reverse their movement, unless the center was located closer to their mass of population.

Features in the Center

To achieve the desired scale and the integration of design, areas for the following groupings have been provided:

- (1) the junior-senior high school is incorporated into the center design. Athletic fields, play courts, and spectator accommodations are integrated with features of a town park and areas for more passive recreational activities.
- (2) a grouping for community administrative buildings and services is adjacent to the recreation area. A community building providing a place for assemblage and leisure activities is directly related to the out-

door space. A central library, distributing to the existing Town libraries, is in close proximity to the high school library so as to prevent a duplication of effort and expense. The administration building for community and Area-wide functions would be the dominant building in this grouping. The central fire and police station would also be located here.

- (3) a community hospital will be located close to the administrative center but with a degree of seclusion that this function requires.
- (4) an office park would provide for a grouping of professional and business offices - the medical offices being located closest to the neighboring hospital. These offices would be mostly small local establishments, but area should be reserved for larger companies that might want to locate branch offices in the Area. Post office, banks and services related to the businesses would also be located here. This office park is located closest to the shopping center as there would be a closer linkage between these two activities.

The groupings would be surrounded by parking areas, landscaped area and adequate space for expansion. The streets surrounding the center will be spacious, with adequate pedestrian ways and trees reserved in center strips. Sitting areas,

landscape features, tot-lots and other public conveniences will be located throughout the area.

The college would contribute a great deal to this feeling of openness and to the scale of the center. Most of the buildings on the campus should be located closest to the center and the more distant areas reserved for open uses. Adjacent to the college and the central area, space should be reserved for churches. The enhanced architecture and the symbolic importance of these churches, entitles them to a location which by quality and position contribute to the central area design.

CHAPTER 22 - CIRCULATION PLAN1. Arterial Routes

These routes serve predominantly as recreation-commuter-access function. Design criteria will be:

- a. separate movement of traffic, especially to allow for maneuvering into the rest areas and scenic spots and to allow slow moving traffic to proceed unhampered.
- b. limited access, having fewest number of grade crossings possible while still allowing routes to function as access to major facilities.
- c. right-of-way will vary with the topography and scenic features but the minimum r.o.w. will be as shown on the cross-section on the accompanying plan for streets and highways.
- d. grade crossings at all intersections except at the center of gravity of the community, where maneuvering and larger volumes would make an underpass desirable.

2. Circulatory Routes

The main circulatory route will provide access to various residential areas as well as a means of circulation from one part of the community to another. In general, these routes follow the periphery of the main residential areas, subdividing them into neighborhoods. This design principle will channel

major traffic streams around the neighborhoods, reducing vehicular movements within.

3. Collector Streets

These streets will serve as collectors of traffic of the minor residential streets, as well as access to individual lots. The design principle is to make parts of the internal neighborhood accessible as possible while avoiding any possibility of leading directly through the neighborhood so as to encourage through traffic.

4. Minor Streets

These streets provide access to the individual homes, and their design and alignment is such that they are preserved for strictly local vehicular movement. They should conform to the topography as much as is practical, creating interesting layouts, reducing construction costs and avoiding layouts that will interfere with the most economic utility installation.

Cross sections for these streets are shown on the accompanying plan for streets and highways.

CHAPTER 23 - UTILITIES AND THE CENTRAL SERVICE AREA

Water and Sewer

Details of a water and sewer system will depend on State regulations and the advice of utility engineers. Water supply, as previously noted, has created some problems in the area. Increasing demands for new types of household appliances plus the increasing population to be served will place greater strains on available sources. It would be safe to say that the present systems will soon approach limits of their capacities and new and more expensive systems involving costly processing plants will be needed. As a result, a unified system for the Four-Town Area might be more economical in the future. The design for the new community system should be planned so as to fit in with this system.

This community is large enough to make an effective operation of a community sewer plant possible. Of the several types of sewage treatment plants available, choice would depend on the advice of a sanitary engineer. However, space is reserved at the central service area for a plant. This site is lower than most parts of the community and a gravity flow system with a minimum number of pumping stations would be able to serve the central area and the denser residential areas.

Central Service Area

A central service area to serve the Four Towns and new com-

munity is proposed. This plan would allow for consolidation of maintenance and warehouse facilities and for the purchase and use of expensive equipment that the individual towns would not be able to afford otherwise. Space for storage and servicing would allow bulk purchasing and employment of a trained purchasing agent. A central incinerator would dispense with many of the communities' garbage disposal problems.

A part of this area would be used for light industry. There are a few buildings available in this part of the site which could be adapted to this type use.

CHAPTER 24 - THE AREA-WIDE PLAN

The basic scheme is to provide a series of recreational areas joined by recreation routes to serve primarily a metropolitan and local population. As some of the major recreation areas in the State - such as the Cape Cod and Berkshire Areas - become more crowded with out-of-State visitors, and as highways become more congested, there is a need for providing more facilities closer to home. This is especially true in view of the trend toward increased leisure time and the need for facilities for the week-end vacationist. As the map on page 146 shows this general area of the metropolitan region is deficient in publicly owned recreation land. This is particularly ironical in view of the potentials of the area.

The plan for increased accessibility should result in the communities taking more initiative in developing their resources, particularly their harbors. It should also lead to less local opposition to those proposals made by other agencies. The end result would be increased facilities for the urbanite and increased revenues to the communities from efficient town-operated marinas and other facilities, as well as increased trade in the Area. The communities environment will have been improved and a framework will have been

established to guide future growth. It would mean more efficient communities as traffic is channelled away from existing towns' centers and off of strictly residential streets.

The Over-all Circulation Plan

The framework will be established by the circulation system which is a scheme to channel the traffic from the Southeast Expressway to key recreational areas along pleasant routes. This will remedy the problem of traffic meandering through the Area, with no strong focal points to attract them. The routes themselves will be adjunct to the recreational facilities and will feature wayside rests, picnic areas, bridle paths and hiking trails. Trees and brooks, and in a few instances small ponds, will be contained within center strips of adequate width so the traffic in one direction will be separated visually from that in the opposite direction. The purpose also is to avoid a wide road bed and to make the route look more like a rural road to the travelers than like a super highway.

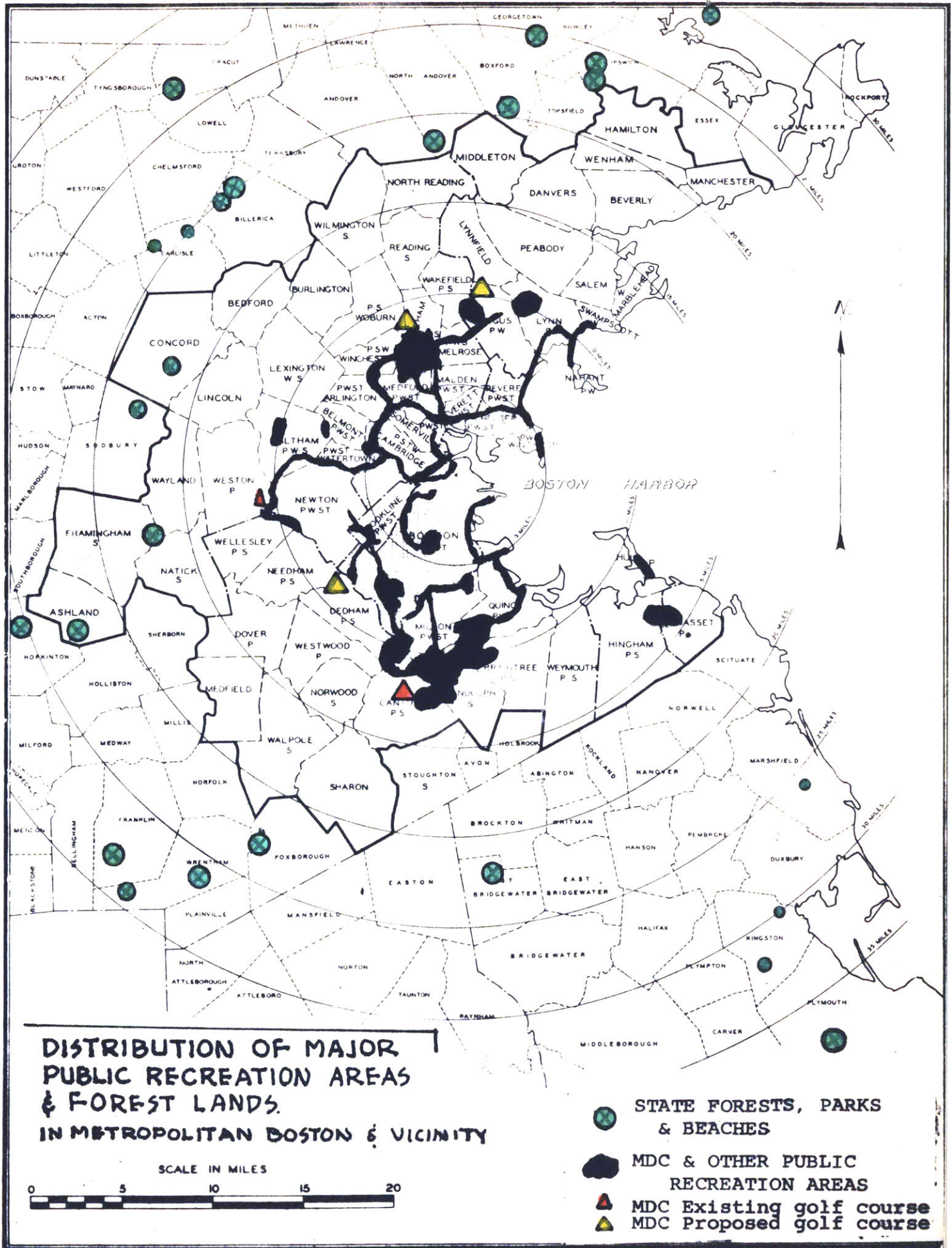
These routes will connect up the existing and proposed recreational and open spaces as described in the survey of the Towns and as shown of the Area-wide plan. In addition, these roads have made the new community more accessible to the surrounding towns and provide commuter routes to the Southeast Expressway. The route from the interchange to Hingham and

Nantasket is proposed as a relocation for State Route 128. The route to Scituate is proposed as relocation for State Route 123, with the latter remaining as an alternate. Because of the connection with the Strawberry Point State Park and other recreational features, the route to Cohasset is likewise expected to become a part of the State system.

Recreation Areas

The major recreational proposal within the Annex is the 550-acre regional recreation area. This would contain a 32-hole golf course, winter sports area, and other activities. One part of the site would be reserved for a fairly intense development to consist of recreation building, outdoor amphitheater, skating rink, swimming pool, athletic fields for regional events and would be a center for drama and art events. This area might come under the supervision of a South Shore arts and recreation association consisting of a number of the South Shore towns, while the golf course should serve a wider area, and might possibly be brought under the supervision of the M.D.C.

There is only one other golf course of this size in the metropolitan area. Operation on this scale is considered more economical and able to accommodate more golfers than several smaller courses might. A choice section of Annex land has been reserved for this purpose, but an efficient and attrac-



tive golf course cannot be built on rough, rocky land which is so often satisfactory for other recreational purposes.

Other parts of the Annex land have been proposed as additions to existing or previously proposed recreation uses. In the southern portion of the site, land is reserved as a part of the State park proposal in Norwell. Along the northern boundary much of the land that was previously a part of the Whitney Woods Reservation would again become a part of this area.

CHAPTER 25 - STAGING PLAN

It is necessary to weigh the space planning of this community against the stage planning so that the objective of acting as a regulator may be realized and so that each neighborhood will be and look as complete as possible at a particular time. Within the first neighborhood there must be included adequate facilities and circulation to meet the needs of the first people in the community.

There are also certain economies to be realized as a consequence of staging community needs in accordance with Four Town needs. Community buildings and educational facilities could be built to ultimate capacity in some instances, thereby saving additional costs of future expansion and renovation, while the surplus space is used by the other communities temporarily.

Period of Ultimate Development and Determination of Staging

The goal is for the new community to have reached approximately ultimate development by 1975. This is considered desirable for several reasons. First, to be most effective as a growth regulator for the Area, the new community should absorb the greatest growth in the beginning, thereby allowing the Four Towns to get their planning households in order and to get political reorganization underway. If staging were

spread over a longer period and the new community taking in an equal number of people during each stage, the over-all effectiveness might be merely a slight relief and not a remedy to help the communities rally sufficiently.

A second point is that many of the new Area-wide facilities and services will be financed partly from funds realized as profits from resale of the land; therefore these funds should be made available in the early stages. Lastly, the new community should be as complete as possible so that it can take its proper place within the reorganized political structure.

Population estimates for the Four Towns were based on past trends during which time the Annex land was not available for development. The new community as proposed will, in all probability, be a stimulus to growth in the Area, and therefore instead of absorbing 10,000 persons from the previously estimated growth it might absorb only 5,000 persons while attracting another 5,000 people into the Area. Therefore, the Area-wide population is more apt to be 35,000 by 1975.

If the new community is only to absorb 5,000 from a total of 30,000, to be most effective the staging within the development period will follow the same general principle as that used in determining the year of ultimate development - the

new community should absorb the greatest number during the first stages and decreasingly less in subsequent stages.

Staging Plan 1963-1975:- The Annex will not be available for development until 1962. Assuming the program for development will be ready to move shortly after abandonment, the first neighborhood would begin in 1963. The accompanying chart shows the staging plan.

Stage 1 - (1963-1965; 3 years) Neighborhood A would be the first to be developed, allowing three years until it has almost reached completion. This area should be built first as it provides housing accommodations for an anticipated demand of rentals. Also it is the closest to community and Area-wide facilities and is the most accessible to the existing road system.

Stage II - (1966-1969; 4 years) Neighborhood B is the area most closely related to Neighborhood A and would be the second least costly to develop in regards to topography. Land values in this neighborhood would have risen because of the development of the recreation routes to the south of it. Finally, more single-family units will be needed by maturing family groups living in the rental units during the first stage.

Stage III - (1970-1975; 6 years) Neighborhood A and

B would have reached almost complete development stages and activity would be concentrated on Neighborhood C. This neighborhood includes some of the roughest topography in the Annex but, at the same time, offers the most attractive and interesting sites for the more expensive architecturally planned home. At this stage land values throughout the Area should have risen to a point where the best price could be realized for this section of the Annex.

STAGING PLAN 1963-1975

Stage	Population	Major Circulation	Community Facilities	Four-Town Facilities
<u>Stage I - 3 yrs.</u> (1963-1965)				
Neighborhood A	2500-3000	New State Route 128 built from Southeast Expressway interchange to Rte. 3-A	One elementary school; secondary school facilities provided at Jr. College; local shopping at major shopping center.	Junior College begun; overflow of high school students accomodated temporarily at Jr. College. Community hospital and central service area begun.
Neighborhood B	200- 500			
Neighborhood C	0			
<u>Stage II - 4 yrs.</u> (1966-1969)				
Neighborhood A	3000-3500	Recreation-com-muter route to Scituate completed and possibly to Cohasset.	Two elementary schools; one neighborhood shopping center; secondary school facilities in one new building.	Junior College expanded to 4-yr. program.
Neighborhood B	2500-3000			
Neighborhood C	200- 500			
<u>Stage III - 6 yrs.</u> (1970-1975)				
	Ultimate	Ultimate	Ultimate	Area wide All facilities have adequate space to provide for expanding needs of the Towns.

PART IV - PLAN EFFECTUATION, ADMINISTRATION, AND ECONOMIC ASPECTSCHAPTER 26 - PUTTING THE PLAN INTO ACTION

Whether these communities become worse off, remain static, or move progressively ahead may be largely a consequence of intelligent citizen participation and enlightened leadership. The policies and decisions they make are due to their system of values and attitudes. Any changes in the physical environment, such as those proposed here, will also require changes in the social and political environment as related to this value system.

Although there are elements in the proposed plan for the Annex which affect every aspect of the citizens' lives, it is doubtful whether the desired changes to make effectuation possible, could be brought about by selling the plan on its face value alone. To do this, places the responsibility on the planner of defining the system of values worth striving for and the determination of values is made a part of the planning process with the planner asking for the blessings of the community with only his professional integrity involved. In this instance where the problem and opportunity involves not only physical change but also includes social and political reorganization the work of other experts is also required.

To sort out the values, attitudes, and expected action patterns is a complex proposition requiring the techniques of the political and social scientist. The economist would also have to be brought into the picture on fiscal matters. The Annex Plan would play the vital role of being the unifying element, the physical and tangible feature around which the experts could structure organization and programs while appealing to the communities system of values. Instead of promoting a physical plan only, they would be appealing to such values as self-sufficiency and Yankee thriftiness while rearranging the tax structure and the towns' administration.

In summary, the effectuation is going to require first, the local leadership to initiate the action and bring the experts into play as a team with the Annex Plan as the common denominator.

Advantages of the Four Towns as a Planning Unit:- There are several factors inherent in existing conditions which should facilitate the effectuation of the plan.

- (1) Physical advantages - the Four Towns are bound by natural barriers which more or less distinguish the Area from the surrounding region. They are bound by ocean, swamp, quarry land, and a river, while there are no major barriers that would act as obstacles to the Towns as a physical unit.

- (2) Social Advantages - The statistics previously presented show that the towns have many similar population characteristics that would indicate common standards of living and common objectives for a living environment. These could be brought to focus on elements of the Annex Plan which relate to their own local plans and on the common facilities and services which would benefit them all.
- (3) Economic and Administrative Advantages - The towns have a common need for working out their problems of deficient services and strengthening weak economic bases through joint-planning and development of their available resources. Although there are some variances, no one of them stands out far above the others in having a high level of services or in being self-sufficient.

Advantages of the Annex and Annex Plan as a Common Denominator:-

- (1) A great deal of the success of the plan depends on the towns' ownership of the land. Passing from one governmental unit to another should make the proposal more acceptable in the public eye than if private land were taken by eminent domain for similar purposes of planning.

- (2) Despite the fact that the Annex land is unequally distributed among the Four Towns, its strategic location could affect all the towns. Differences in interest at present are due primarily to unequal distribution of responsibility to act. If the town boundaries within the Annex are dissolved and the opportunities to be gained from the plan become the central issue, support from the Four Towns would tend to be more equalized.
- (3) The facilities and services proposed are new functions. Therefore, by initially placing the administration of the hospital, community college, central service area, and other area-wide services into a central administration, the communities have gained new benefits without having surrendered any of their existing functions. New services would serve as a practical demonstration of the advantages of central administration and gradually the towns would surrender those local functions which might be better administered at this new central level.

CHAPTER 27- POLITICAL REORGANIZATION AND PLANNING CONTROLSOrganization for Effectuating the Plan

The organization for effectuating the plan should be approached in the same way as proposals for physical change - it must take place in stages. Initially the planning function must be made the central issue of this program, and not complete reorganization of existing political structures. Therefore, the agency created to study and determine planning policy must fit into the existing structure. As further changes in the physical plan take place, so also must there be changes in the organization for effectuation.

The proposals for organization is a job for the political scientist and public administrator. The following steps in organization for effectuation are only suggestions as to what the process might be:

Step I. Four-Town Joint Planning Commissions - A special commission to be organized and composed of equal representation from the Four Towns, employing full-time professional help. Its purpose and function would be:

- a. to dissolve the political boundaries within the

Annex so that it can be studied as a unit.

- b. to prepare the initial plans, policies and possible means of effectuation; to be the coordinating agency between the local planning boards; and to promote the plan so as to get the support of the townspeople.
- c. to represent the towns before the State legislature so as to get special enabling legislation needed before proceeding on to the next step.
- d. to initiate the proceedings between the towns and the Federal Government, setting up a program of site acquisition and financial assistance if needed.

Step II. Special District and Annex Authority:- An

Authority would be set up with power to purchase and resell the land in accordance with the general plan. This authority would be the administrative agency while the community is developing. It would enforce covenants, collect taxes, prepare budgets and other administrative functions. Expenditures for community facilities and services would come from revenue sources within the special district. Funds received from resale of the land would be used for Area-wide facilities and services as determined by joint agreement. General policy would still be determined as a result of cooperative efforts and the joint-planning commission would still be the coordinating and planning agency. The advantages of the special

district are:

- a. it is an organized entity possessing structural form with an official name and perpetual succession. It has the right to sue and be sued, to make contracts, and obtain and dispose of property and would have considerable fiscal and administrative flexibility to fit the unusual Annex situation.
- b. the Federal government and State government might be more willing to support many of the proposals for the Annex if this new unit were created which is more capable of performing the proposed functions.
- c. it is a logical step in working toward the overall political reorganization while still fitting in with the existing structure so that gradual changes can be made.
- d. its indebtedness would not affect the limits of local indebtedness as set by the State on the Towns.

Step III - Federation:- As the Annex develops and begins to take form as a separate community it should have its own local government, and be incorporated as a new town. The four existing communities and the new town would form a federation with each town retaining its autonomy and surrendering only those functions which could best be performed at a central level.

It is important to note at this point, that the reorganization proposed has been structured around the planning function. The actual area to be involved in this federation would depend on studies by other specialists. Therefore, the new federated unit need not be limited to the Four Towns and the new community. Further study might reveal that there are very important and practical reasons for including other towns in this new unit, particularly Hull and possibly Marshfield and Hanover.

Possibility of Step IV:- Metropolitanism - This reorganization would in many ways make the possibility of metropolitan government more acceptable to these small towns. United in this way and more self-sufficient, the idea of metropolitanism may not appear as such a threat to their individuality and "grass roots" policy making. The success of this joint program and reorganization could be a demonstration and stimulus to other communities to reorganize along somewhat similar lines.

Planning Controls

As has been previously mentioned, the more conventional forms of police power planning controls with their many limitations need not be used. Planning will be regulated through protective covenants running with the land. Land should be sold off in large enough units to allow a developer to layout

a fairly large portion of a neighborhood. The major street pattern of that area will have been laid out by the planning boards and adopted as an official plan. Within a particular unit the over-all density as proposed on the general development plan will determine the number of houses that may be built in that particular area. A great deal of variation as to individual lot size would be allowed, depending on topography and other determinants.

A planning board and an architectural control board will be the administrative agencies. Plans as submitted will be checked against the covenants, and design factors. In the matter of planning board controls, the responsibility of judging design features assumes the employment of professionals experienced in design and civil engineering to assist the lay board. This planning board will also act as an area-wide planning agency and a coordinator between the Towns.

Covenants are actually contracts made between parties and are agreements as to the way in which land shall be used. This type of regulation enables the carrying out of objectives previously stated, including architectural controls. Protective covenants would take the form of blanket provisions which apply to a whole area rather than separate controls in each deed. Customary recommendations for these provisions

would be:

- (1) control of land use, including restrictions as to type and design
- (2) architectural control of all structures including fences and walls
- (3) lot size control to a limited extent
- (4) limitations on cost of structures, the purpose being to insure a variety of accommodations for all income levels within each planning unit, resulting in neighborhoods with diversity and interest
- (5) reservations for utility easements
- (6) other clauses which may be found desirable or necessary, particularly controls of grading plans and limitations on the removal of trees

These covenants run with the land and are automatically extended unless a stipulated percentage of the property owners demand a change.

CHAPTER 28 - ECONOMIC ASPECTS OF THE PLANFinancing the Plan

Acquiring the Land:- It is expected that the Federal Government, in the interest of promoting planning, would cooperate in all ways within its power not only in making the land available at reasonable terms, but also in assisting the communities in financing the purchase. The communities cannot afford to take on too much indebtedness and there would be problems in apportioning the debt between the communities. Payments should be made from funds realized as profits from resale of the land.

Circulation:- The major arterials are proposed as a part of the State system and would be paid for by the State. Most interior roads would be built by the developers of residential and commercial projects. All other roads would be included in the cost of Area-wide projects.

Community facilities and services:- Community facilities and services would be assessed against the people living within the community.

Area-wide facilities and services:- These projects would be financed partly from land resale profits and partly by the individual towns. Municipal bonds, backed by the full faith and credit of Four Towns jointly should be accepted on

the bond market at a much lower interest rate than bonds backed by individual communities.

The State could play a vital role toward the success of the program, not only because of grants-in-aid but also because it is in a position to encourage the integration of these local governments. It has been State policy to contribute larger grants-in-aid to regional high schools so as to induce more towns to form regional districts.(1) The same policy might be applied to features in the Annex plan which qualify for State assistance or grants-in-aid.

Tax Equalization

One of the objectives of the entire program has been to provide a higher level of services to the Towns through cooperative efforts in Area-wide projects. It is also expected that the same equalization of services would be strived for in all efforts. An equalization of services would make little sense without an equalization of taxes. The purpose of joint planning and federation is to apply the ability-to-pay theory to the Area as a whole, instead of allowing each town to support its own activities at whatever level its own economic base will allow.

(1) Chapter 645, Section 9, p. 173 of Municipal Bulletin #19. "Extracts from the General Laws" Dept. of Taxation & Corporation, Commonwealth of Mass. Sept. 1957.

The soundest approach would seem to be the pooling of effort on the part of the various planning agencies in the Area in the development of one Area-wide land use plan that is sound in every other respect. Then a balance might be worked out among the communities in terms of assets and liabilities. This, like all other parts of the program, will have to take place over a period of time, but it must be worked into the over-all program from the start by the tax economist. The advantages Hingham will have as a result of potential industrial sites along the Southeast Expressway and the availability of the Hingham Depot as an industrial park would create a wider disparity between the towns than exists at present in regards to taxable resources. Therefore, an agreement should be reached in the beginning of the program before this town becomes so financially independent as to lose interest in a joint program.

APPENDIX A

NUMBER OF NEW FAMILY ACCOMMODATIONS

As represented by building permits issued for new construction, not including apartments created through improvements to existing buildings, and by assessor's estimates where permits are not issued.

	<u>Hingham</u>	<u>Scituate</u>	<u>Conasset</u>	<u>Norwell</u>
1947	119		25	6
1948	119		44	54
1949	150		55	14
1950	177	200	32	31
1951	139	122	52	70
1952	165	102	34	75
1953	117	165	39	77
1954	185	158	30	80
1955	152	177	64	55
1956	89	147	25	52
1957	59	64	17	22

Source: Mass. Department of Commerce, Division of Research.
Aug. 1958.

APPENDIX B

POPULATION INCREASE DATA

TABLE 1.

POPULATION INCREASE FOR INDIVIDUAL TOWNS:- 1910-1955.

	<u>1910</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1955</u>
Hingham	4,965	5,604	6,657	8,003	10,665	13,418
Scituate	2,482	2,534	3,118	4,130	5,993	8,341
Cohasset	2,585	2,639	3,083	3,111	3,731	4,729
Norwell	1,410	1,348	1,519	1,871	2,515	4,127

Source: U.S. Census Data and 1955 State Census Data.

TABLE 2.

NATURAL INCREASE AND IN-MIGRATION IN INDIVIDUAL TOWNS:1945-1955

	<u>Net In-Migration</u>	<u>% of Total Increase</u>	<u>Natural Increase</u>	<u>% of Total Increase</u>
Hingham	2,130	57%	1,612	43%
Scituate	2,777	80%	691	20%
Cohasset	780	66%	409	34%
Norwell	1,684	85%	296	15%

Source: State Census of Population, 1955

APPENDIX C

POPULATION CHARACTERISTICS AND HOUSING DATA FOR INDIVIDUAL TOWNS AND FOR THE STATE AND METROPOLITAN AREA.

TABLE 1.

EDUCATION (Persons 25 years old and over)

	<u>Median No. of School Years</u>	<u>% Completing Less than Five Grades</u>	<u>% Completing High School or More</u>
Metropolitan Area	11.9	7.0%	49.0%
State	10.9	8.1%	42.6%
Hingham	12.6	2.3%	72.0%
Scituate	12.4	2.5%	66.8%
Cohasset	12.5	2.8%	67.5%
Norwell	12.3	1.8%	61.3%

TABLE 2.

INCOMES OF FAMILIES & UNRELATED INDIVIDUALS

	<u>Under \$1500</u>	<u>\$1500-2999</u>	<u>\$3000-4999</u>	<u>Over \$5000</u>	<u>Median Income</u>
Metropolitan Area	23.7%	25.4%	25.9%	25.0%	\$3042
State	24.7%	27.1%	26.0%	22.2%	\$2909
Hingham	19.3%	23.5%	23.7%	33.5%	\$3437
Scituate	21.9%	23.7%	25.8%	28.6%	\$3161
Cohasset	40.3%	23.2%	14.9%	21.6%	\$2146
Norwell	17.1%	31.7%	26.8%	24.4%	\$3042

APPENDIX C. (Cont.)

TABLE 3.

VALUE OF ONE-DWELLING-UNIT STRUCTURES

	<u>Under</u> <u>\$5000</u>	<u>\$5000-</u> <u>9,999</u>	<u>\$10,000-</u> <u>15,000</u>	<u>Over</u> <u>\$15,000</u>	<u>Median</u> <u>Value</u>
Metropolitan Area	6.0%	37.7%	34.1%	22.2%	\$10,878
State	11.8%	45.7%	27.2%	15.3%	\$ 9,144
Hingham	4.9%	27.9%	35.8%	31.4%	\$12,405
Scituate	10.2%	36.7%	33.0%	20.1%	\$10,420
Cohasset	9.1%	24.9%	23.9%	42.1%	\$13,308
Norwell	12.4%	40.5%	22.7%	20.4%	\$ 8,982

Source: 1950 U.S. Census

BIBLIOGRAPHY

American Public Health Association, Committee on the Hygiene of Housing. "PLANNING THE NEIGHBORHOOD". Public Administration Service, Chicago Ill. 1948. 90 p.

Ascher, Charles S. "PRIVATE COVENANTS IN URBAN REDEVELOPMENT". pg. 223-309 in "URBAN REDEVELOPMENT: PROBLEMS AND PRACTICES" by Coleman Woodbury. University of Chicago Press. 1953. 764 p.

Bollens, John C. "SPECIAL DISTRICT GOVERNMENTS IN THE UNITED STATES". Univ. of Calif. Press, Berkeley & Los Angeles, Calif. 1957. 280 p.

Beuscher, J.H., "MATERIALS ON LAND USE CONTROLS". College Printing and Typing Co., Madison, Wisconsin. 1957. 580 p.

Chapin, F. Stuart. "URBAN LAND USE PLANNING". Harper and Bros. N.Y. 1957. 397 p.

Community Builder's Council of the Urban Land Institute. "THE COMMUNITY BUILDER'S HANDBOOK". Urban Land Instit., Washington, D.C. 1954. 314 p.

Dahir, James. "THE NEIGHBORHOOD UNIT PLAN, ITS SPREAD AND ACCEPTANCE". Russel Sage Foundation, N.Y. 1947. 91 p.

Dobriner, William M. "THE SUBURBAN COMMUNITY". G.P. Putnam's Sons. N.Y. 1958. 416 p.

Gabrielsen, Alexander M. and Miles, Caswell M. "SPORTS AND RECREATION FACILITIES FOR SCHOOL AND COMMUNITY". Prentice Hall Inc. N.Y. 1958. 370 p.

Gallion, Arthur B. "THE URBAN PATTERN". D. Van Nostrand Co. Inc., N.Y. 1950. 446 p.

Greaney, Walter F. Jr. "LOCAL-STATE-FEDERAL FISCAL RELATIONS IN MASSACHUSETTS". Bureau of Government Research, Univ. of Mass., Amherst. 1957. 28 p.

Gulick, Luther H. "THE COMING AGE OF CITIES". Institute of Local Government, Univ. of Pittsburgh. 1956. 19 p.

Horack, Frank E. Jr. and Nolan, Val. "LAND USE CONTROLS". West Publishing Co., St. Paul, Minne. 1955. 240 p.

Maddox, Russell Webber. "EXTRATERRITORIAL POWERS OF MUNICIPALITIES IN THE UNITED STATES". Oregon State College, Corvallis, Oregon. 1955. 114 p.

Nelson, Richard, "THE SELECTION OF RETAIL LOCATIONS". F.W. Dodge Corporation, N.Y. 1957. 422 p.

Kostka, Joseph. "NEIGHBORHOOD PLANNING". University of Manitoba, Winnipeg, Canada. 1957. 160 p.

Simon, Henry A. "FISCAL ASPECTS OF METROPOLITAN CONSOLIDATION". Bureau of Public Administration, Univ. of Calif. Berkeley, Calif. 1943. 67 p.

SPECIAL REPORTS

Adams, Howard, & Greeley, Planning Consultants. "A PRELIMINARY GENERAL PLAN FOR NORWELL - 1975" Report prepared for the Norwell Planning Board, Norwell, Mass. December 1958. 20 p.

Benjamin, B. Allen, Planning Consultant. "TOWN OF SCITUATE MASSACHUSETTS-GENERAL PLAN SUMMARY REPORT" prepared for the Scituate Planning Board, Scituate, Mass. November 1958. 48 p.

Cohasset Planning Board. "A TEN YEAR PROGRAM FOR COHASSET". a preliminary study submitted by the Planning Board, Cohasset, Mass. Feb. 1957. 23 p.

Commonwealth of Massachusetts. "NEEDS IN MASSACHUSETTS' HIGHER EDUCATION WITH SPECIAL REFERENCE TO COMMUNITY COLLEGES". Report of the Special Commission on Audit of State Needs, House Bill #3036, March 26, 1958. 118 p.

Commonwealth of Massachusetts. "STUDY CONCERNING TOURIST ROUTE SYSTEM FOR MASSACHUSETTS". Prepared by the Mass. Dept. of Commerce, Division of Planning. Boston. Jan. 1957. 8 p. & maps

Commonwealth of Massachusetts. "MASSACHUSETTS PUBLIC SCHOOL FACILITIES SURVEY". Dept. of Education. Boston. 1954.

Edwards, Kelcey and Beck, Consultants for the Commonwealth of Mass. "DEVELOPMENT PROGRAM: PARKS-RESERVATIONS-RECREATIONAL FACILITIES". Prepared for the Metropolitan Districts Commission Parks Division. Boston. 1956. 84 p.

Edwards, Kelcey and Beck, Consultants, for the Commonwealth of Mass. "PRELIMINARY REPORT OF THE DEPARTMENT OF NATURAL RESOURCES RELATIVE TO THE FURTHER DEVELOPMENT OF THE PUBLIC FORESTS, PARKS AND OTHER LANDS OF THE COMMONWEALTH". A report prepared for the Mass. Dept. of Natural Resources. Boston. 1957.

Furcolo, Foster, Governor of Mass. "THE RESPONSIBILITY OF THE COMMONWEALTH IN HIGHER EDUCATION". A special message to the Mass. Legislature. Boston. 1958. 37 p.

Kroepsch, Robert H., Executive Secretary of the New England Board of Higher Education. "TWO SURVEYS-THIS IS WHERE NEW ENGLAND STUDENTS GO TO COLLEGE AND THESE ARE NEW ENGLAND'S COLLEGES AND UNIVERSITIES". Report prepared for the New England Regional Education Conference of the President's Committee on Education Beyond High School. Winchester, Mass. May 1, 1957. 29 p.

Robbins, J. Stanton, Consultant. "PRELIMINARY REPORT AND RECOMMENDATIONS TO THE RHODE ISLAND DEVELOPMENT COUNCIL FOR INCREASING EMPLOYMENT AND INCOME FROM THE RECREATION AND TOURIST INDUSTRY AND GENERALLY BENEFITTING THE STATE". Providence, R.I. 1953. 36 p.